# 4.0 ENVIRONMENTAL ANALYSIS OF THE PROJECT

## 4.1 Introduction to Environmental Analysis

### 4.1.1 Consistency with State, Regional and Local plans

As discussed in Section 1.4, Regulatory Setting, land use in the Project area is guided by the 1987 TRPA Regional Plan, its applicable Plan Area Statements (PAS), and community plans (the Kings Beach Industrial Community Plan and the Kings Beach Community Plan). The Regional Plan also serves as a proxy for the LTBMU Forest Plan; therefore, local projects that are in conformance with the Regional Plan are, by proxy, in conformance with the Forest Plan.

The KBICP area is generally defined as the block of parcels north of Speckled Avenue to the north, Cutthroat Avenue to the south, Secline Street to the west, and a few parcels east of Coon Street to the east (Figure 8). While this area would remain mostly commercial, resource management use is allowable for watershed improvements including erosion control, runoff control, and stream environment zone (SEZ) restoration (TRPA 1996). Therefore, the actions proposed by the Project are, in principle, consistent with the provisions of the KBICP.

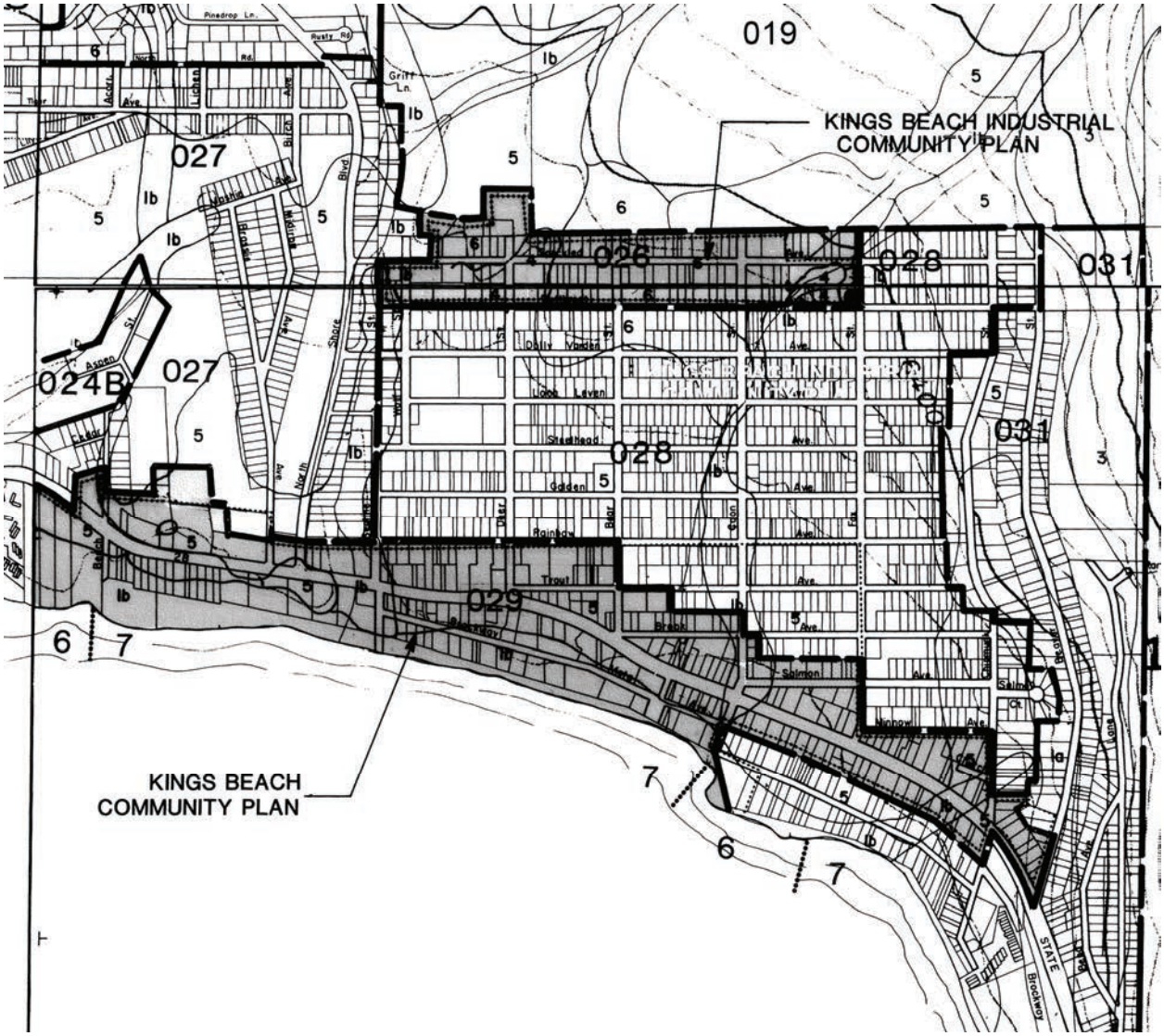


**Figure 8. The Kings Beach Community Plan and Kings Beach Industrial Community Plan areas.**
*Also Plan Areas 019, 027, 028 and 031. (Source: TRPA)*

The KBCP area, generally defined as downtown Kings Beach, is that area extending from the vicinity of the Safeway Market at the western boundary to the area of Chipmunk Street at the eastern boundary, and generally fronting on SR 28. The area is bounded on the north by Rainbow Avenue, and on the south by the lake (TRPA 1996). Through the KBCP, development in the area is encouraged to be commercial, tourist accommodation, and recreational. However, resource management use for watershed improvements is also allowable in this plan area and encouraged under the Implementation Chapter. Additional allowable resource management uses in the Project area include Timber Management, Open Space, and Vegetation Protection (TRPA 1996).

The remainder of the Project area falls within TRPA Plan Areas 019, 027, 028 and 031. Plan Area 019, Martis Peak, is largely an undeveloped area to the north of Kings Beach, designated for moderate to intensive resource management (including timber management programs that enhance the wildlife, recreational, and vegetation resources). Plan Area 027, Woodvista, is the area west of Secline Street, including Griff Creek. Except for Griff Creek, Plan Area 027 is designated for residential use, maintaining the existing character of the neighborhood. Plan Area 028, Kings Beach Residential, is the area between Secline and Beaver Street, generally north of the KBCP and south of the KBICP and is designated as mixed residential. Plan Area 031, Brockway, includes the east side of Kings Beach and is designated for residential use, maintaining the existing character of the neighborhood. Resource management use for watershed improvements is allowable in all of these Plan Areas.

### Consistency with Plan Goals

The KBCP establishes goals and objectives, special policies, programs, and strategies for funding and implementation of improvement programs. The KBCP includes Elements which address land use, transportation, conservation, recreation and public service. It also identifies specific goals which may relate to the Project. Specifically, the Public Service Facilities Goal promotes upgrades to public services and facilities to support existing and new development and ensure environmental protection. The improvements to the storm water management facilities and SEZ enhancement are consistent with this goal. Other goals of the KBCP, including the Urban Design and Development Goal, Traffic and Parking Goal, and Recreation Goal, are promoted through the improvements to the storm water drainage system, including improvements to road shoulder areas and rehabilitation of storm water outfalls along the margin of Lake Tahoe. The Project also supports the KBCP's vision for conservation of natural resources by providing improvements to SEZs within the Project area.

The Project will make a substantial contribution toward achieving planning goals at the community and regional level and conforms with the permissible uses spelled out in the plans governing the Project area.

# 4.2 Aesthetics

## 4.2.1 Existing Conditions

The Kings Beach community is a mixture of industrial, commercial, and residential uses. Although the neighborhood is more densely developed than most suburban communities on the north shore of Lake Tahoe, it still maintains a rural forest character due to its large trees, surrounding forest, and sparsely placed vegetated public parcels throughout the area. Portions of the Project area are adjacent to the lake and express lakefront aesthetic value.

Most of the proposed improvements would be constructed at or below grade in previously disturbed areas and/or with in the right-of-way of local streets. The Project would also construct aboveground permanent structures such as sediment traps, curb-and-gutter, and sedimentation basin inlet/outlet structures. Generally, these aboveground features would stand less than two feet in height and, when applicable, be painted to blend into the existing surrounding structures, vegetation or natural features. The aboveground improvements would be visible from residential streets. Aboveground improvements, such as curb-and-gutter along the residential streets outside of the Commercial Core would be slightly visible from SR 28 but would be considered an aesthetic improvement from existing degraded road shoulder conditions. The portion of SR 28 within the Project area is an eligible state scenic highway under the California Scenic Highway Program, but it has not been officially designated under any federal or state program. Therefore, no federal or state regulations for scenic highways apply.

### Regulatory Setting

The opportunities for scenic restoration have been identified by the TRPA Scenic Thresholds. Kings Beach has been identified by the TRPA Scenic Quality Improvement Program (SQIP) as in need of scenic improvements for the highway unit. The Project could temporarily affect identified scenic resources. According to the TRPA Code of Ordinances (Chapter 30), all state and federal highways are considered "scenic highways". Therefore, SR 28 is designated as a scenic highway. The Code distinguishes between urban, transitional, and natural scenic highway corridors. The segment of SR 28 in the Project area generally fits the description of an "urban scenic highway corridor". The Code establishes design requirements for modifications to scenic highway corridors, including for electrical and communications service and highway fixtures. The Project would not involve any construction of modifications covered by the Code. When fully implemented, the Project would be consistent with the TRPA thresholds and goals for scenic resources by considering and appropriately maintaining the existing resource (see following analysis).

The portion of SR 28 within the Project area is an eligible state scenic highway under the California Scenic Highway Program, but it has not been officially designated under any federal or state program. Therefore, no federal or state regulations for scenic highways apply.

## 4.2.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| AESTHETIC RESOURCES<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have substantially adverse effect on a scenic vista? | | | | X |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | | X |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | | | X | |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | X | |

**a) Would the Project have a substantially adverse effect on a scenic vista?**

**No Impact.** None of the proposed improvements would impact scenic vistas in or around the Project area because all above ground improvements are less than two feet high and would be painted or formed to match surrounding structures, vegetation or natural features. In addition, several Project features, including detention basins and earthen berms, would be constructed in areas where existing conditions are disturbed and where existing views consist of weedy vegetation, rubble piles, and fill. Therefore, addition of Project features would result in a net long-term aesthetic improvement over existing conditions when constructed and maintained in conformance with the design of the proposed Project.

**b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

**No Impact.** The portion of SR 28 within the Project area is an eligible state scenic highway under the California Scenic Highway Program, but it has not been officially designated under any federal or state program. Therefore, no federal or state regulations apply. No visible trees, rock outcroppings, and historic buildings would be substantially altered by the Project. Improvements would not be visible to travelers on SR 28 because all proposed facilities within line-of-sight from SR 28 and 267 would be below ground. Some of the Griff Creek improvements may be visible but those improvements will be constructed to match surrounding structures, vegetation or natural features. For example, Griff Creek improvements include earthen berms and fill removal. Earthen berms would be designed to follow existing contours and would be planted with native plants and grasses, resulting in a net improvement over existing conditions. Fill removal areas would be revegetated consistent with adjacent riparian, wetland, and floodplain habitats, resulting in a net long-term improvement over existing conditions.

**c) Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less Than Significant Impact.** Many proposed improvements, such as storm water pipes, would be located underground and, therefore, would not impact visual resources. Improvements such as sedimentation basins and grass lined channels would add vegetation and would not degrade the existing character of the neighborhood. Improvements such as sediment traps, inlet/outlet structures and curb-and-gutter would be visible but would not substantially degrade the existing visual character or quality of the Project area and surroundings because they are proposed within existing right of way, would be less than two feet in height, and would blend with surrounding structures, vegetation or natural features. Because detention basins, earthen berms, and fill removal areas would be located in areas that are currently unsightly because of weedy vegetation, fill, and

other debris, addition of these facilities would result in a net long-term improvement over existing conditions.

TRPA identifies views of the shoreline as seen from Lake Tahoe as a scenic resource. Improvements would occur at storm water outfalls, which are visible from the lake. However, no additional outfalls to Lake Tahoe would be constructed. Some of the existing outfalls would be upgraded for increased volume, but the locations and overall aesthetic appearance of the outfall structures would remain the same. None of the other facilities, such as detention basins and rock bowls, would be visible from Lake Tahoe.

**d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less Than Significant Impact.** The Project would not create new sources of substantial light that would adversely affect the views in the area because there are no new light sources proposed on the permanent aboveground structures. The proposed improvements that have exposed metal would be painted for visual as well as maintenance purposes. The paint would reduce any potential glare impacts.

### 4.2.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to aesthetics, therefore no mitigation measures are required.

# 4.3 Agricultural Resources

## 4.3.1 Existing Conditions

The Project area is developed for urban use and there are no known agricultural uses within the Project area. Soil type and land use are the two determining categories for agriculturally significant land (FFMP 2006). Land within the Project area falls outside the California Department of Farmland Mapping and Monitoring Program's (FMMP) survey boundary, therefore, no information from the FMMP is available (Kisko 2008).

The Natural Resource Conservation Service (NRCS) establishes the criteria for designating soils as suitable for prime and statewide farmlands. The following soil mapping units that have been mapped at the Project site (NRCS 2008):

- Jorge very cobbly fine sand loam, 15-30% slopes;
- Jorge very cobbly fine sandy loam, 30-50% slopes;
- Jorge-Tahoma complex, 15-30% slopes;
- Kingsbeach stony sandy loam 2-15% slopes; and
- Tahoma-Jorge complex 2-15% slopes.

None of the above soil types found in the Kings Beach region fall under the NRCS soil type criteria for prime agricultural soils (Soil and Candidate Listing 1980).

### Regulatory Setting

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act (Government Code Section 51200–51297.4, as amended), enables local governments to enter into contracts with private landowners that restrict specific parcels of land to agricultural or related open-space use. In return, these landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses rather than the property's full market value. There are no known properties under Williamson Act contract within the Project area.

The California Farmland Mapping and Monitoring Program (FMMP) creates farmland maps that are regularly incorporated into planning documents and environmental impact reports statewide. These maps include designations for a variety of agricultural land uses, including delineation between areas that are most appropriate for agriculture or grazing based on soil, climate, and water characteristics. The maps also depict water, urbanized or built-up land, and non-agricultural lands of other types (such as mountains and forests). The FMMP maps are not regulatory in nature, though they may become so if incorporated into other adopted documents. FMMP mapping is not available for the Project area.

## 4.3.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| AGRICULTURAL RESOURCES<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project convert prime farmland, unique farmland, or farmland of statewide or local importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | | X |
| b) Does the project conflict with General Plan or other policies regarding land use buffers for agricultural operations? | | | | X |
| c) Does the project conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X |
| d) Does the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland (including livestock grazing) to non-agricultural use? | | | | X |

**a) Would the Project convert prime farmland, unique farmland, or farmland of statewide or local importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**No Impact.** There are no agricultural activities at the site. No FMMP mapping is available that would indicate that the area contains prime farmland, unique farmland, or farmland of statewide or local importance exists at or adjacent to the site. Also, no farmland is designated under the Kings Beach Community Plan (TRPA 1996). Therefore, there is no impact to known farmland that could result from implementation of the Project

**b) Does the Project conflict with General Plan or other policies regarding land use buffers for agricultural operations?**

**No Impact.** The Project does not conflict with the Kings Beach Community Plan or any other policies in Placer County in regards to land use buffers for agricultural operations because there is no land designated for this purpose in the Project area (TRPA 1996).

**c) Does the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No Impact.** No land in the Project area currently holds a Williamson Act contract (Williamson Act Program 2006).

**d) Does the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland (including livestock grazing) to non-agricultural use?**

**No Impact.** The Project does not involve any other changes in the environment which could result in the conversion of Farmland to non-agricultural uses because the improvements proposed will not induce urban growth over the long term.

## 4.3.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to agricultural resources, therefore no mitigation measures are required.

# 4.4 Air Quality and Climate Change

## 4.4.1 Existing Conditions

The Project is located in Placer County and within the Lake Tahoe Air Basin (LTAB). The LTAB is comprised of five (5) counties in two (2) states; the counties of Placer and El Dorado in the state of California and the counties of Douglas, Carson City, and Washoe in the state of Nevada. This collaboration forms the Lake Tahoe Air Basin (LTAB) that is overseen and managed by the Tahoe Regional Planning Agency (TRPA).

For this Project, air quality is managed by the Placer County Air Pollution Control District (PCAPCD). Within the PCAPCD, seven criteria air pollutants are monitored including: ozone, carbon monoxide, nitrogen dioxide , sulfur dioxide, particulate matter less than or equal to 10 microns in diameter, (PM10,), particulate matter less than 2.5 microns in diameter (PM2.5,), and lead.

The California Environmental Protection Agency (CEPA) Air Resources Board (ARB) sets designated limits on certain criteria pollutants. The PCAPCD portion of the LTAB is listed as an attainment zone for ozone, carbon monoxide and PM2.5 and a non- attainment zone for PM10.

The PCAPCD does not have any air quality monitoring stations within the LTAB, however, CEPA ARB has three (3) monitoring stations. These stations are located on the south end of the LTAB and all are located within El Dorado County, two (2) of which are seasonal only (CEPA ARB February 10, 2005).

### Sensitive Receptors

The PCAPCD defines sensitive receptors for air quality as residences, schools, playgrounds, childcare centers, athletic facilities, long term health care facilities, and retirement homes. Sensitive receptors are located within the Project area.

### Regulatory Setting

The Federal Clean Air Act (CAA) amendments of 1970 empowered the EPA to develop National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These criteria pollutants include nitrogen dioxide ($NO_2$), carbon monoxide (CO), particulate matter smaller than 10 microns in diameter ($PM_{10}$), ozone ($O_3$), sulfur dioxide ($SO_2$), and lead (Pb). These standards include primary standards designed to protect public health and secondary standards designed to protect public welfare, predominately visibility.

The States are required to implement and enforce the NAAQS under a process called State Implementation Plans (SIPs), which are approved by EPA. Generally, the SIPs are composed of air quality rules that are applicable to stationary sources that may emit criteria or hazardous air pollutants. In California, the California Air Resources Board (CARB) was created by the Mulford-Carrell Air Resources Act in 1968. CARB's primary responsibilities include: (1) to develop, adopt, implement, and enforce the State's motor vehicle pollution control program; (2) to administer and coordinate the State's air pollution research program; (3) to adopt and update the State's ambient air quality standards; (4) to review the operations of the local APCDs; and (5) to review and coordinate the SIPs for achieving Federal ambient air quality standards.

California adopted statewide ambient air quality standards for ozone, CO, $NO_2$, $SO_2$, sulfates, $PM_{10}$, airborne lead, hydrogen sulfide, and visibility-reducing particles. State standards for the criteria pollutants are more stringent than the Federal standards in order to protect the most sensitive members of the populations.

The Placer County Air Pollution Control District (PCAPCD) currently enforces air quality regulations for constructions activities. The PCAPCD has developed rules for control of air

emissions including visible emissions (Rule 202), nuisance emissions (Rule 205), fugitive dust (Rule 207) and stationary internal combustion engines (Rule 242) that may apply to the activities proposed Project. The Project does not include any permanent sources of air emissions. Temporary air quality effects related to construction activities would be reduced through required mitigation.

Pursuant to the goal of protecting air quality within the Lake Tahoe Basin, TRPA has established air quality standards for carbon monoxide, ozone, particulate matter, visibility, traffic volume, wood smoke, vehicle miles traveled, and atmospheric deposition. The area is in attainment for the carbon monoxide, particulate matter and atmospheric deposition standards and in nonattainment for visibility, wood smoke , ozone and vehicle miles traveled. The TRPA Code of Ordinances includes two chapters which address air quality, Chapter 91 (Air Quality) and Chapter 93 (Traffic and Air Quality Monitoring). Relevant to the proposed Project, Chapter 91 includes idling restrictions for combustion engines and prohibits burning of waste.

## 4.4.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| AIR QUALITY AND CLIMATE CHANGE<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | X |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | X | | |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | X | | |
| d) Expose sensitive receptors to substantial pollutant concentrations? | | X | | |
| e) Create objectionable odors affecting a substantial number of people? | | | X | |

The Air Quality analysis was based on potential impacts that may incrementally increase emission of air pollutants and may temporarily violate CEPA ARB standards for the LTAB, but would not pose permanent impacts. Construction activities associated with the Project would generate temporary, short-term minor amounts of pollution emissions. Construction activities will adhere to the TRPA air quality threshold program and all Placer County best available mitigation measures.

### a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

**No Impact.** The Project would not conflict with, or obstruct the implementation of any applicable air quality plan. All potential impacts would be avoided with compliance to the PCAPCD and TRPA air pollution regulations. Best Management Practices (BMPs) from the TRPA Code of Ordinances and Handbook of BMPs shall be implemented by the construction Contractor as related to air quality.

### b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

**Less than Significant Impact with Mitigation Incorporated.** Construction of the Project will cause temporary emissions related to operation of combustion engines and generation of airborne particulates (dust) during construction. Required air emission controls imposed by the PCAPCD and TRPA would reduce the temporary emissions during construction activity. Implementation of

mitigation measures would further reduce air emissions associated with the Project. Following implementation of the mitigation measures, the Project will not cause, or significantly contribute to violations of the CEPA ARB and LTAB existing air quality standards.

Implementation of Mitigation Measures AIR-1 through AIR-6 would reduce the impact to a less-than-significant level.

**c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

**Less than Significant Impact with Mitigation Incorporated.** Cumulatively considerable net increases of any criteria pollutant would not result from the construction of the Project. The temporary nature of the Project will not result in release of emissions which exceed thresholds for ozone precursors. All air quality impacts resulting from the construction activities would be well below established levels set forth by the governing agencies. The basis for this analysis is that construction activities are of short duration and emissions would cease after construction activities conclude.

Implementation of Mitigation Measures AIR-1 through AIR-6 would reduce the impact to a less-than-significant level.

**d) Would the project expose sensitive receptors to substantial pollutant concentrations?**

**Less than Significant Impact with Mitigation Incorporated.** Construction activities would adhere to PCAPCD and TRPA compliance. These regulations and implementation of mitigation measures would reduce the potential exposure of sensitive receptors (e.g., Kings Beach Elementary School) to air emissions.

Implementation of Mitigation Measures AIR-1 through AIR-6 would reduce the impact to a less-than-significant level.

**e) Would the project create objectionable odors affecting a substantial number of people?**

**Less than Significant Impact.** Construction activities would adhere to PCAPCD and TRPA compliance. These regulations and implementation of the Mitigation Measures AIR-1 through AIR-5 would mandate that the Project maintain levels less than significant when creating objectionable odors. Objectionable odors pertaining to construction of the Project may include exhaust fumes from equipment, but this would not affect a substantial number of people.

### 4.4.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure AIR-1** To control wind-borne dust, the construction Contractor shall securely cover all dump/haul truckloads, and water all exposed disturbed soil twice daily or as needed.

**Mitigation Measure AIR-2** The construction Contractor shall remove all dirt and mud, generated from their activities, from adjacent streets within the Project site as necessary and not less than three times per week.

**Mitigation Measure AIR-3** All unpaved surfaces shall have a maximum vehicular speed limit of 15 miles per hour.

**Mitigation Measure AIR-4** The construction Contractor shall comply with the PCAPCD Rule 228 Fugitive Dust during the duration of the construction Project. This is to ensure emissions do not exceed hourly levels.

**Mitigation Measure AIR-5** When not in use, the construction Contractor shall keep equipment idling to a minimum.

**Mitigation Measure AIR-6** A publicly visible sign shall be posted on the Project site by the construction Contractor for the duration of the Project. This sign shall have the telephone number of the person and agency to contact for any complaints and/or inquires related to dust generation and other air quality problems resulting from the construction and/or construction activities of the Project.

# 4.5 Biological Resources

## 4.5.1 Existing Conditions

### Existing Conditions - Vegetation

The Project assessment considered special-status plant species, which included:

- USFWS listed endangered, threatened, and candidate species (USFWS 2006)
- USFWS species of concern; receives no legal protection (USFWS 2006)
- California endangered, threatened, rare and candidate species (CNPS 2001)
- LTBMU Forest Service sensitive species (USFS 2006)
- LTBMU sensitive species (LTBMU 2006)
- TRPA special interest species (TRPA 1982).

Julie Etra, a botanist from Western Botanical Services Inc. (WBS), conducted vegetation surveys on July 11, 2007, August 6, 2007, and July 8, 2008. Public properties were surveyed on foot, while private properties, due to access restrictions, were surveyed from a slowly moving automobile (stopping to enable extended observation when deemed necessary). The Griff Creek SEZ upstream to Griff Lane was carefully surveyed by following transects roughly 10 feet apart, meandering where needed to cover all habitat. The commercial corridor was not surveyed where hard cover precluded plant establishment. All species were identified to the lowest taxonomic level possible. Noxious weed locations were recorded with a GPS unit, or by direct mapping where conditions such as dense vegetation stymied the GPS unit. General community structure and condition was noted. The lower drainage of Griff Creek was not surveyed since private property limited access, and the Kings Beach shore zone was not surveyed for Tahoe Yellow Cress. These surveys will be conducted before Project designs are finalized, and designs will be modified as necessary to avoid sensitive species or habitats.

The majority of the Project area subject to proposed improvements is heavily developed as a high-density residential area with a commercial strip along Highway 28. The remaining dominant native vegetation communities include: Mountain Alder/Mixed Willow and Jeffrey pine. These vegetation types roughly correspond to the communities described in *A Manual of California Vegetation* (Sawyer and Keeler-Wolf 1995). However, neither fits neatly into the communities as field-verified in the Project area.

#### Mountain Alder/Mixed willow

The Griff Creek vegetation community roughly corresponds to the typical mountain alder series described in Sawyer and Keeler-Wolf (1995). However, several species of willows located in the Project area differ from typical series and big-leaf maple (*Acer macropylluum*) does not occur in the Project area. Conifers, particularly Jeffrey pine and white fir, form a significant part of the overstory. Therefore, there is a Jeffrey pine series component to this drainage. Creeping snowberry (*Symphoricarpos mollis*) is a dominant understory species along with thimbleberry (*Rubus parviflorus*). Species of willow include Lemmon's willow (*Salix lemmonii*), Scouler's willow (*S. scouleriana*), and shining willow (*S. lucida. var lasiandra*). Red osier dogwood (*Cornus sericea*) is also a common shrub along the creek.

#### Jeffrey pine

The Jeffrey pine series is the dominant vegetation type throughout the Kings Beach Project area. Much of this area has been altered as the result of residential and commercial development, including landscaped residences. The surrounding overstory vegetation is dominated by Jeffrey pine (*Pinus jeffreyi*) with occasional white fir (*Abies concolor*) and incense cedar (*Calocedrus decurrens*).

Although, the understory is poorly vegetated common shrub species identified in the area included greenleaf manzanita (*Arctostaphylos patula*) and bitterbrush (*Purshia tridentata*).

### Potential Special-Status Plant Species

Thirty-one (31) special-status botanical species were initially identified as potentially occurring in the Kings Beach Project Area. Of these, twenty-one (21) species are not expected to occur within the Project area due to range, elevation, and habitat limits.

Species not expected to occur in the Project area are: Washoe tall rockcress (*Arabis rectissima* var. simulans), Tiehm's rockcress (*Arabis tiehmii*), Tahoe draba (*Draba asterophora* var. *asterophera*), Cup Lake draba (*Draba asterophora* var. *macrocarpa*), Starved daisy (*Erigeron miser*), Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*), Slender-leaved pondweed (*Potamogeton filiformis*), Subalpine fireweed (*Epilobium howellii*), Hutchinson's lewisia (*Lewisia kelloggii ssp. Hutchinsonii*), Kellogg's lewisia (*Lewisia. kelloggii* ssp. *kelloggii*), Long-petaled lewisia (*Lewisia longipetala*), Blandow's bog-moss (*Helodium* blandowii), Broad-nerved hump-moss (*Meesia uliginosa*), Meesia moss (*Meesia longiseta*), Myurella moss (*Myurella julaceae*), Orthotrichum moss (*Orthotrichum praemorsum*), Shevock's bristle-moss (*Orthotrichum shevockii*), Spjut's bristle-moss (*Orthotrichum spjutti*), Tundrae pohlia moss (*Pohlia tundrae*), Sphagnum moss (*Sphagnum spp.*), and Branched collybia (*Dendrocollybia racemosa*).

For more complete information on special-status plants in the Project area, please refer to the Biological Assessment/Biological Evaluation (BA/BE) in Appendix D.

### Wetlands

Small potential wetlands associated with the Griff Creek drainage were identified by ENTRIX biologists during 2006 habitat surveys (Figure BIO-1). The potential wetlands were informally delineated in the field based on hydrology and vegetation characteristics, but soils were not analyzed pursuant to U.S. Army Corps of Engineers guidance. A formal wetland delineation will be performed before Project designs are finalized and before permitting of the Project is completed. Potential effects to wetlands are discussed in Section 4.5.2 below.

### Noxious and Invasive Weeds

Figure BIO-2 provides information on noxious and invasive weeds that were found in the Project area. For more complete information on existing weed conditions in the Project area, please refer to the Noxious Weed Risk Assessment provided as Appendix B of the BA/BE (Appendix D).

### Revegetation

Road shoulder revegetation has occurred intermittently throughout the Project area since the 1970's and intermediate wheatgrass (*Elytrigia intermedia* var. *intermedia*) has persisted from these efforts. However, the plant has not spread to riparian or upland portions of the Project site and is not invasive. In the early 1990s a reach of Griff Creek off Wolf Street (north of Dolly Varden Ave.) was restored by removing fill material. The vegetation along the creek currently includes some woody riparian species. The upland revegetation has been highly successful with upland species including sulfur buckwheat (*Eriogonum umbellatum*) and bitterbrush. The Coon Street basin was constructed in 1996 as part of the Kings Beach Erosion Control Project. This basin is well vegetated in both the wetter basin bottoms and on upland slopes.

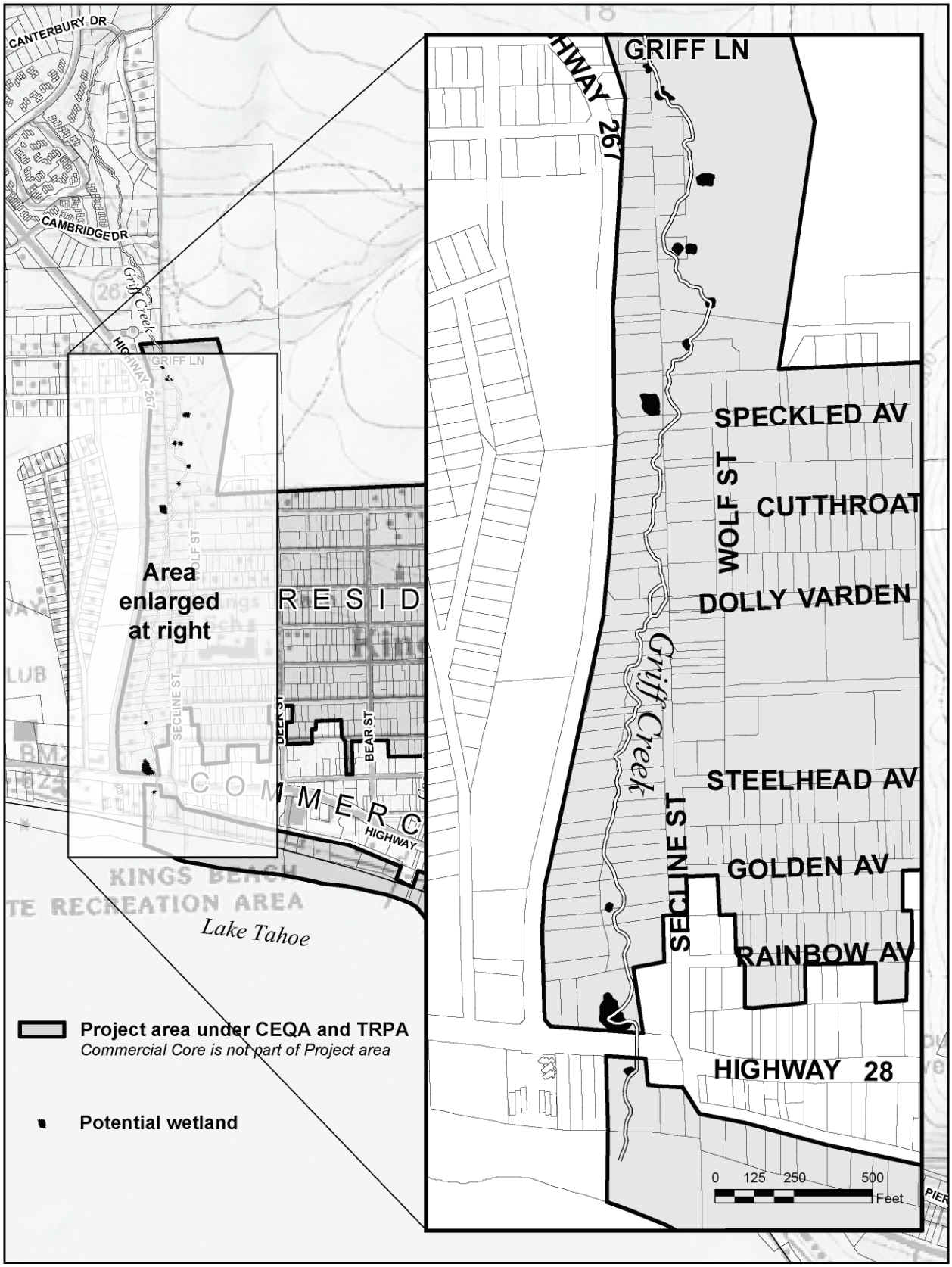


**Figure BIO-1. Potential wetlands identified during the 2006 habitat surveys.**

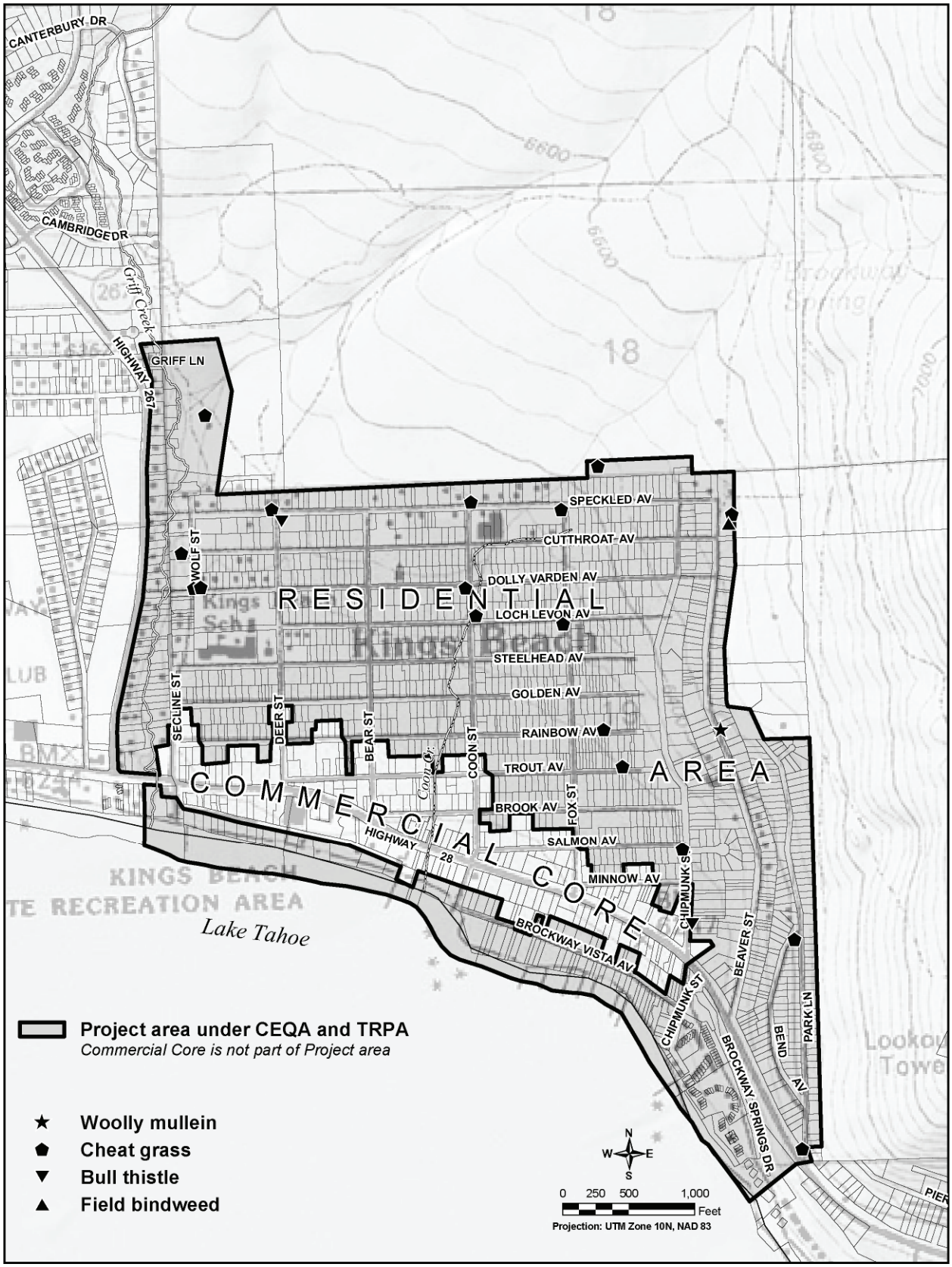


**Figure BIO-2. Identified populations of noxious and/or invasive weeds in the Kings Beach Project area.**

## Existing Conditions - Wildlife

The Project assessment considered special-status wildlife species, which included:

- Federal listed endangered, threatened, and candidate species (USFWS 2008)
- California endangered, threatened, California special concern species, and California fully protected species (CDFG 2007)
- USFS Forest Service sensitive species (USFS 1998)
- USFS Forest Service Management Indicator Species (USFS 2008)
- TRPA special interest species (TRPA 1982). In addition, the TRPA Special Interest group "waterfowl" were also included under the term "special-status."

Sara Ebrahim, an ENTRIX terrestrial biologist, conducted reconnaissance surveys on August 30 and 31, 2006 and September 26 and 29, 2006 to assess habitat and potential occurrences of special-status species within the Project area (including California spotted owl, northern goshawk, mountain yellow-legged frog and northern leopard frog). The reconnaissance surveys involved walking the Griff Creek SEZ, driving the Kings Beach neighborhood, and visually surveying accessible segments of the Coon Street SEZ. Observations of specific feature were noted, and locations of specific features were recorded with a GPS unit or on Project area aerial photos. Habitat suitability was assessed for special-status wildlife identified during the literature review as having potential to occur within the Project area. Habitat was assessed for cover, forage, breeding habitat suitability, disturbance, and other features and characteristics. In June and July of 2007, Ms. Ebrahim performed USFS protocol-level surveys (Bombay et al. 2000) in Project areas likely to possess willow flycatcher (*Empidonax traillii*) habitat.

Most of the Project area is developed for residential and commercial uses. As a result, limited wildlife habitat is present except on the edges of the Project site. These areas support marginal Jeffrey pine and mountain alder habitat and associated wildlife species.

### Fish Habitat

Tom Taylor, an ENTRIX fisheries biologist, conducted a fish access and habitat survey of Griff Creek on July 9, 2007. He determined that during high flows, medium to large lake-run fish can access Griff Creek at least up to Cutthroat Avenue, and possibly up to Griff Lane. Cambridge Drive represents the upstream limit of fish migration, as the culverts there are impassable for fish at all flows (ENTRIX 2007).

Young-of-the-year rainbow trout and brook trout fry were observed in the channel upstream to Griff Lane, and there is reasonably good rearing habitat for trout fry up to that point. Juvenile brook trout (6-8 inches) were observed in several small pools up to Cutthroat Avenue. Lahontan speckled dace, a small (3-4 inches) native minnow, were only found in the lower cobble-dominated section of Griff Creek between Lake Tahoe and State Route 28. Conditions upstream from SR28 prevent these small fish from migrating further upstream, and upstream habitat for speckled dace is poor, lacking large substrate elements preferred by this species.

Lake-run rainbow trout spawn in the spring, and evidence exists that large (16-18 inches) adult rainbow trout have migrated up Griff Creek to a large pool just upstream from Dolly Varden Avenue. The occurrence of rainbow trout fry throughout the surveyed reach is an indication of successful spawning from lake-run rainbow trout, even with Griff Creek's substantial deficiencies in regard to fish passage. For brown trout, however, low flows during the fall create impassable conditions which limit their migration (brown trout spawn in the fall).

No other fish were observed during the survey, and it is unlikely that a stream as small as Griff Creek would support a year-round population of adult rainbow or brown trout.

## Potential Special-Status Wildlife Species

Twenty-five (25) special-status wildlife species were initially identified as potentially occurring in the Project area: two (2) fishes, two (2) invertebrates, three (3) amphibians, ten (10) birds, and eight (8) mammals. Of these, fourteen (14) species are not expected to occur within the Project area due to range, elevation, and habitat limits.

Species not expected to occur in the Project area are: golden eagle (*Aquila chrysaetos*), peregrine falcon (*Falco peregrinus anatum*), great grey owl (*Strix nebulosa*), Sierra Nevada mountain beaver (*Aplodontia rufa californica*), Townsend's big-eared bat (*Corynorhinus townsendii*), California wolverine (*Gulo gulo luteus*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), American marten (*Martes Americana*), Pacific fisher (*Martes pennanti pacifica*), Sierra Nevada red fox (*Vulpes vulpes nector*), Lahontan tui chub (*Gilia bicolor pectinifer*), Mount Lyell salamander (*Hydromantes platycephalus*), Lake Tahoe benthic stonefly (*Capnia lacustra*), and Great Basin rams-horn (*Helisoma (Carninifex) newberryi).*

No "critical habitat" (as defined by USFWS) exists in the Project area (USFWS 2008). Likewise, no Federal Endangered, Threatened or Proposed species were detected during surveys in the Project area, and survey biologists determined that habitat for Federally listed species is marginal to poor in the Project area.

See Table 4 in the BA/BE (Appendix D) for a list of special-status wildlife species potentially occurring in the Lake Tahoe Basin.

**Table BIO-1. Occurrence of suitable wildlife habitat in the Project area.**

| SPECIES | SUITABLE HABITAT IN PROJECT AREA | HABITAT CHARACTERISTICS |
|---|---|---|
| *Birds* | | |
| *Accipiter gentilis* Northern goshawk | Potential | Mature coniferous forests |
| *Anas platyrhynchos* Mallard/waterfowl | Potential | Shallow ponds, lakes, rivers, marshes and flooded fields. Nests in concealing vegetation. |
| *Aquila chrysaetos* Golden eagle | No | Rolling foothills, mountain areas, sage-juniper flats, deserts. Cliff-walled canyons provide nesting habitat in most part of range; also, large trees in open areas. |
| *Dendroica petechia brewsteri* Yellow warbler | Potential | Open canopy deciduous woodland with shrubs. Nesting: Riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging. Also nests in montane shrubbery in open conifer forests. |
| *Empidonax trallii* Willow flycatcher | Potential | Nests in extensive montane willow thickets 2,000-8,000 feet elev. |
| *Falco peregrinus anatum* Peregrine falcon | No | Nests and roosts on protected ledges. |
| *Haliaeetus leucocephalus* Bald eagle | Potential | Coniferous and conifer/hardwood forests near water. Low human disturbance. |
| *Pandion haliaeetus* Osprey | Potential | Conifer and conifer/hardwood forests near water. Low human disturbance. |
| *Strix nebulosa* Great grey owl | No | Breeds in old-growth red fir, mixed conifer, or lodgepole pine habitats, always in the vicinity of wet meadows |
| *Strix occidentalis occidentalis* California spotted owl | Potential | Mature forests with suitable nest sites. Low human disturbance. |
| *Mammals* | | |
| *Aplodontia rufa californica* Sierra Nevada mountain beaver | No | Found in areas with dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada and east slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water. |

| SPECIES | SUITABLE HABITAT IN PROJECT AREA | HABITAT CHARACTERISTICS |
|---|---|---|
| *Corynorhinus townsendii* Townsend's big-eared bat | No | Desert and pinyon/scrub associations. Roosts in caves, mines and buildings |
| *Gulo gulo luteus* California wolverine | No | Montane conifer, subalpine conifer, alpine dwarf-shrub, wet meadow, and montane riparian habitats. Prefer areas with low human disturbance |
| *Lepus americanus tahoensis* Sierra Nevada snowshoe hare | No | Boreal riparian areas in the Sierra Nevada. Thickets of deciduous trees in riparian areas and thickets of young conifers. |
| *Martes Americana* American marten | No | Mature coniferous forests |
| *Martes pennanti pacifica* Pacific fisher | No | Mature coniferous forests |
| *Odecoileus hermionus* Mule deer | Potential | Forests, brushfields, and meadows statewide. |
| *Vulpes vulpes nector* Sierra Nevada red fox | No | Coniferous forests above 5,000 feet, often associated with montane meadows |
| *Fish* | | |
| *Gilia bicolor pectinifer* Lahontan tui chub | No | Large, deep lakes of the Lahontan basin. Algal beds in shallow, inshore areas seem necessary for successful spawning, egg hatching, and larval survival |
| *Onochorhynchus clarki henshawi* Lahontan cutthroat trout | Potential | Lakes and streams of the Lahontan basin. |
| *Amphibians* | | |
| *Hydromantes platcyephalus* Mount Lyell salamander | No | Massive rock areas in mixed conifer, red fir, lodgepole pine, and subalpine habitat, 4,000 to 11,600 feet. Active on the surface only when free water is available, in the form of seeps, drips, or spray. |
| *Rana muscosa* Mountain yellow-legged frog | Potential | Inhabits ponds, tarns, lakes, and streams at moderate to high elevations. |
| *Rana pipiens* Northern leopard frog | Potential | Quiet permanent or semi-permanent aquatic habitat with emergent and submergent vegetation, and vegetated habitat with moist |
| *Invertebrates* | | |
| *Capnia lacustra* Lake Tahoe benthic stonefly | No | Endemic to lake Tahoe. Found at depths of 95-400 ft. Associated with deepwater plant communities of algae, mosses, and liverworts. |
| *Helisoma (Carninifex) newberryi* Great Basin rams-horn | No | Larger lakes and slow rivers, including larger spring sources and spring-fed creeks. Snails burrow in soft mud. |

Sources: CDFG 2008; USFWS 2008; USFS 2006, 2007a, 2007b; TRPA 2002

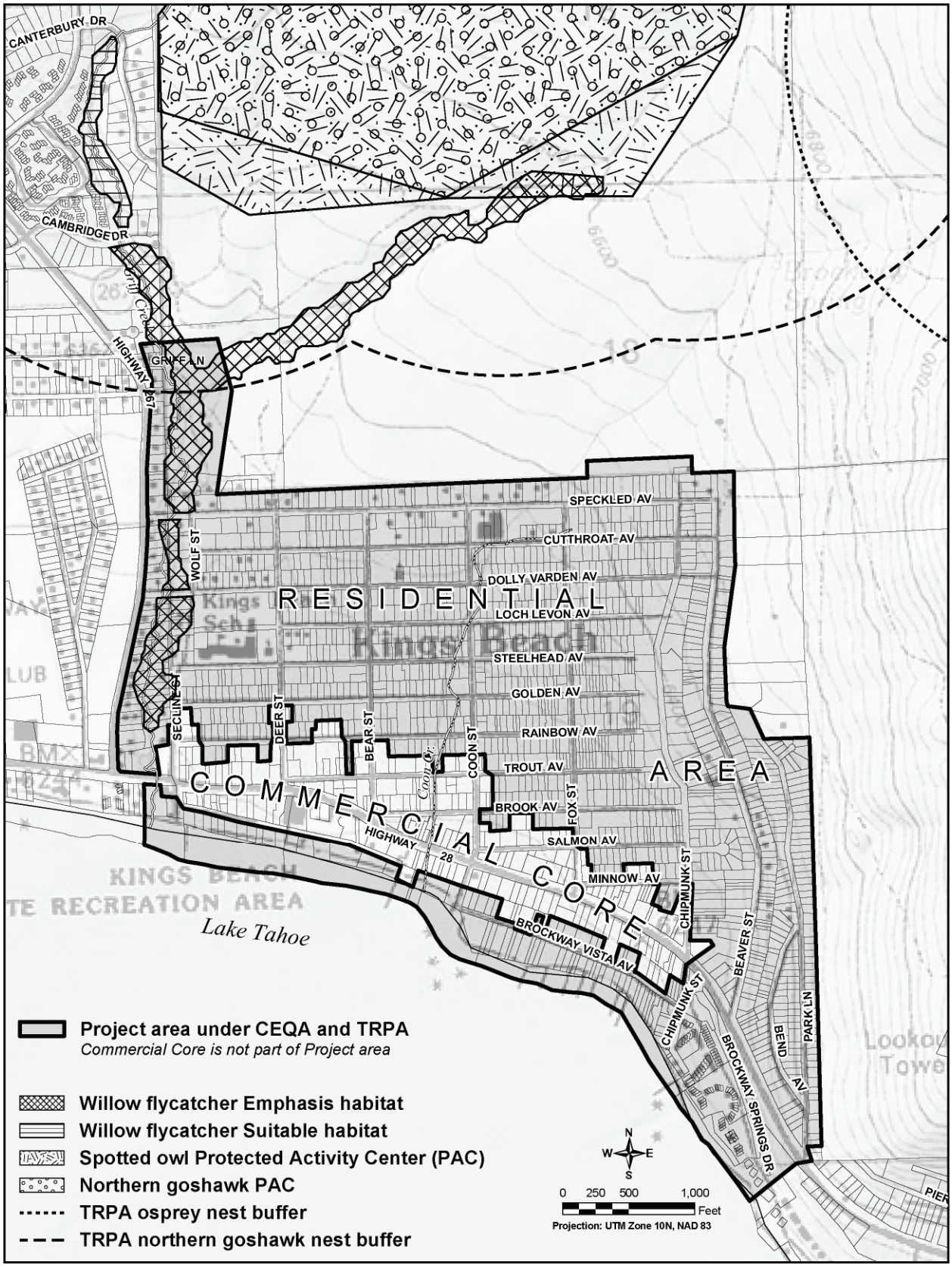


**Figure BIO-3. Special-status habitat information in and near the Project area.**
*Source: USFS 2007b*

## Regulatory Setting

At the federal level, the Endangered Species Act of 1973 (16 USC §1531 et seq.; 50 CFR Parts 17 and 222) includes provisions for protection and management of species that are federally listed as threatened or endangered and designated critical habitat for these species. The USFWS is the administering agency for the above authority for terrestrial and avian species. The Migratory Bird Treaty Act (16 USC §703-711; 50 CFR Subchapter B) provides for protection of migratory birds, including basic prohibitions against any taking not authorized by Federal regulation. The USFWS is also the administering agency for the provisions of this Act.

The Rivers and Harbors Act (§10; 33 USC §201 et seq.) is administered by the USACE and establishes protections for waters of the United States. The USACE is also the administering agency for provisions of the Clean Water Act of 1977 (33 USC §1251-1376; 30 CFR §330.5[a]26) that provide for the protection of wetlands.

In California, the California Endangered Species Act of 1984 (California Fish and Game Code §2050-2098) establishes provisions for the protection and management of species listed as endangered or threatened, or designated as candidates for such listing. The act includes a requirement for consultation "to ensure that any action authorized by a State lead agency is not likely to jeopardize the continued existence of any endangered or threatened species . . . or results in the destruction or adverse modification of habitat essential to the continued existence of the species" (§2090). Plants of California declared to be endangered, threatened, or rare are listed at 14 CCR §670.2. Animals of California declared to be endangered, threatened, or rare are listed at 14 CCR §670.5. The administering agency for the above authority is the CDFG.

The Native Plant Protection Act of 1977 (California Fish and Game Code §1900 et seq.) lists State-designated rare and endangered plants and provides specific protection measures for identified populations. The administering agency for the above authority is the CDFG. The CDFG also administers the California Species Preservation Act of 1970 (California Fish and Game Code §900-903) for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California.

### TRPA Thresholds

TRPA has determined environmental threshold carrying capacities for vegetation, wildlife, and fisheries. In addition, thresholds for other categories, such as water quality, set targets for biological resources.

#### *Vegetation Thresholds*

There are four vegetation thresholds. The first threshold, a general vegetation standard, seeks to "[i]ncrease plant and structural diversity of forest communities through appropriate management practices as measured by diversity indices of species richness, relative abundance, and pattern." The second threshold, a standard for uncommon plant communities, seeks to "[p]rovide for the nondegradation of the natural qualities of any plant community that is uncommon to the region or of exceptional scientific, ecological, or scenic values." The third threshold, a standard for plant species of concern, seeks to "[m]aintain a minimum number of population sites for each of five sensitive plant species." The fourth threshold, which is a standard for late seral[4]-old growth (LSOG) ecosystems, seeks to "[a]ttain and maintain a minimum percentage of 55% by area of forested lands within the Tahoe Region in a LSOG condition, and distributed across elevation zones." Forested lands within TRPA designated urban areas are excluded in the calculation for threshold attainment (TRPA 2004a).

[4] Late seral means the stage in forest development that includes mature and old-growth forest.

In addition to these thresholds, TRPA has standards regarding tree removal. Within lands classified by TRPA as conservation or recreation land use or SEZ, any live, dead or dying tree greater than or equal to 30 inches diameter at breast height (dbh) in westside forest types shall not be cut, and any live, dead or dying tree greater than or equal to 24 inches dbh in eastside forest types shall not be cut. Within non-SEZ urban areas, individual trees larger than 30 inches dbh that are healthy and sound must be retained unless all reasonable alternatives (including Project design modification) to retain the tree are not feasible. There are exceptions to the tree removal standards, as described in Chapter 71.2.A1-10, including large public utilities projects if TRPA finds there is no other reasonable alternative (TRPA 2004a). The Project area is located in eastside forest type and contains non-SEZ as well as SEZ within its boundaries, most notably Griff Creek and Coon Creek.

### *Wildlife Thresholds*

There are two TRPA wildlife thresholds. The first threshold, a general standard, seeks to "provide a minimum number of populations sites and disturbance zones for TRPA listed species." Perching trees and nesting sites shall not be physically disturbed, nor shall the habitat within disturbance zone be manipulated in any manner, unless needed to enhance habitat quality. The second threshold, a management standard for wildlife habitats of special significance, states that "[a] non-degradation standard shall apply to wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations." (TRPA 2004a)

### *Fisheries Thresholds*

TRPA has adopted three threshold standards for fisheries to ensure the protection of fish habitat and to provide for the enhancement of degraded habitat. The first standard has a goal to achieve the equivalent of 5,948 total acres of excellent lake fish habitat. The second standard has a goal of maintaining 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat. The third standard states that a nondegradation standard shall apply to all instream flows (TRPA 2004a).

### *Soil Conservation Thresholds*

TRPA soil conservation thresholds include a standard for maintaining naturally functioning SEZs. This standard seeks to preserve naturally-functioning SEZs in their natural hydrologic condition; restore all disturbed SEZ in undeveloped, unsubdivided lands; restore 25% of SEZ lands identified as disturbed, developed, or subdivided, and obtain a 5% total increase in the area of naturally functioning SEZ lands (TRPA 2004a).

## 4.5.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| BIOLOGICAL RESOURCES<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? | | X[5] | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | | X | | |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | X | | |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | X | |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | | X |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | | X |

### a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Vegetation

**Less than Significant Impact with Mitigation Incorporated.** Surveys performed by Western Botanical Services, Inc. (WBS) indicate that no Special Status Plant Species occur within the Project area. Surveys were not conducted at the proposed outfalls for *Rorippa subumbellata* (Tahoe yellow cress) since proposed drainage improvements had not been determined at the time of the survey; however, occurrence in the Project area is unlikely because potential habitat (lake shore) is heavily impacted by recreational activity and existing development. Nonetheless, to ensure minimization of the potential for Project construction to adversely affect the species, Mitigation Measure BIO-5 is required.

Additionally, grading activities have the potential to disturb riparian vegetation during construction of improvements, including excavations of floodplain areas and in-channel improvements along Griff Creek. The impacts to vegetation would be minimized through controls on grading activities (see Mitigation Measures GEO-2 and WQ-1). Revegetation of disturbed areas would comply with TRPA's requirements (described below). The revegetation plan for all phases of the Project will be

[5] Surveys have not yet been conducted for *Rorippa subumbellata* (Tahoe yellow cress) but occurrence in the Project area is unlikely because potential habitat (lake shore) is heavily impacted by recreational activity and existing development.

prepared and submitted to TRPA for approval. A tree survey has not been completed for these areas but the Project shall comply with the requirements of TRPA regarding tree removal.

Surveys of noxious weeds at the Project site indicate widespread occurrence of *Bromus tectorum* (cheatgrass), *Verbascum thapsus* (mullein), and minor occurrence of *Cirsium vulgare* (bull thistle). In order to control the spread of weeds, Mitigation Measure BIO-6 is required.

### Wildlife

**Less than Significant Impact with Mitigation Incorporated.** Surveys performed by the LTBMU indicate that no California spotted owls are currently nesting within the Project area, and the Project area does not overlap a spotted owl Protected Activity Center (PAC). Project activities are not expected to directly impact California spotted owl habitat. Project related activities would not result in the removal of trees known to be used for nesting, nor would it alter suitable foraging habitat within or immediately adjacent to suitable California spotted owl habitat identified by the LTBMU. However noise from Project related construction activities could impact California spotted owls nesting activities should they establish new nests within 0.25 mile of the Project area. Mitigation Measure BIO-1 addresses this potential adverse effect.

Surveys performed by the LTBMU indicate that no northern goshawks are currently nesting within the Project area. Under these conditions, Project activities would not be expected to directly impact northern goshawk habitat. Project related activities would not result in the removal of trees known to be used for nesting, nor would it adversely alter suitable habitat within the TRPA buffer (i.e., a 0.5 mile protection buffer around known nest sites). Project related activities proposed near Griff Lane are within the TRPA 0.5 mile buffer zone and include the addition of grade control structures and removal of a pile of old road fill. The planned activity would not lead to the degradation of suitable northern goshawk habitat. However, noise from Project related construction activities could impact northern goshawk nesting activities. Mitigation Measure BIO-2 is presented to minimize the potential adverse effect.

Habitat surveys performed for both Sierra Nevada yellow-legged frogs and northern leopard frogs determined that the available habitat in the Griff Creek SEZ is marginal to poor for both species and neither species was observed during the habitat assessment. The Project would include stabilization of the Griff Creek channel to reduce channel bed erosion through the installation of cobble and gravel sediment as grade controls. The Project would also include biotechnical bank protection (i.e., boulders and willow planting) which would improve bank stability. The stabilization of the banks and bed would reduce sediment loading. In addition, the Project would reconnect the Griff Creek channel with its floodplain to increase water infiltration, and to promote revegetation and sediment deposition. These actions would generally improve habitat for the Sierra Nevada yellow-legged frog and northern leopard frog; however, during construction the Project would disturb potential habitat and likely disturb individuals, if present. To avoid or minimize the potential short-term adverse effects during Project construction, Mitigation Measure BIO-3 is required.

The LTBMU has identified willow flycatcher habitat within the Project area along Griff Creek. The habitat is marginal to poor, but is defined as "emphasis" habitat. Improvements to willow flycatcher habitat would result from the stabilization of the Griff Creek channel proposed by the Project. During construction, the Project would disturb potential habitat of willow flycatcher if present. To avoid or minimize the potential short-term adverse effects during Project construction, Mitigation Measure BIO-4 is required.

The Project is not expected to have substantial adverse effect on mallard/waterfowl. The small amount of potential habitat occurs primarily in already disturbed areas, and the Project would not permanently reduce available habitat. However, this Project will temporarily disturb potential

habitat. If this species is encountered during construction of the Project, it will be protected by following standard management requirements.

The Project is not expected to have a substantial adverse effect on bald eagles. This species was not observed during field surveys and the only mapped perch tree in the vicinity is separated from the Project area by developed neighborhoods and commercial area. However, this Project will temporarily disturb potential perch habitat. If this species is encountered during construction of the Project, it will be protected by following standard management requirements.

The Project is not expected to have a substantial adverse effect on osprey. This species was not observed during field surveys and potential habitat occurs in already disturbed areas. However, this Project will temporarily disturb potential perch habitat. If this species is encountered during construction of the Project, it will be protected by following standard management requirements.

This Project is not expected to have a substantial adverse effect on mule deer. Potential habitat occurs in already disturbed areas. In addition, proposed Project facilities would not permanently reduce available habitat. However, this Project will temporarily disturb potential habitat. If this species is encountered during construction of the Project, it will be protected by following standard management requirements.

The Project is not expected to have any adverse effect on Lahontan cutthroat trout. The species was presumed extirpated from the area until one member of the species was reported caught in Lake Tahoe in 2008 (Theresa Loupe, USFS, personal communication, 2008), indicating the species has the potential to occur near the Project area. However, Griff Creek is unlikely to support this species, based on survey work performed by Tom Taylor (ENTRIX fisheries expert) in 2007 (see existing conditions, above). Work in the Griff Creek channel may disrupt salmonid habitat temporarily, but activity will take place during low water, when lake-run trout are unable to navigate up the creek. Lahontan cutthroat trout is not expected to occur in Griff Creek, and therefore, the Project will not adversely affect this species. Nonetheless, if this species is encountered during construction of the Project, it will be protected by following standard management requirements.

Water quality improvements are expected to have a beneficial effect on all aquatic species in the Project area, and Lake Tahoe.

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

Vegetation

**Less than Significant Impact with Mitigation Incorporated.** TRPA identifies SEZ as a sensitive habitat. Approximately 2 acres of SEZ are located within the Project area along Griff Creek. Short-term vegetation removal in this area would occur during construction to allow access to the improvement areas, and would be minimized through BMPs and Mitigation Measure BIO-8. The restoration of Griff Creek will result in removal of riparian vegetation both directly and indirectly though the temporary re-route of Griff Creek's waters. Additionally, grading activities will disturb riparian vegetation during construction of improvements, including excavations of floodplain areas and in-channel improvements along Griff Creek. The impacts to vegetation would be minimized through controls on grading activities (see Mitigation Measures GEO-2 and WQ-1). Revegetation of disturbed areas would comply with TRPA's requirements. The revegetation plan for all phases of the Project will be prepared and submitted to TRPA for approval. In the long-term, the Project would not decrease the distribution or the number/species of plants. The result of the restoration will be improved riparian vegetation and wildlife habitat.

Implementation of the Project would be required to comply with the provisions of Chapter 77 of the TRPA Code of Ordinances. The provisions require development and implementation of a Revegetation Plan. In compliance with TRPA requirements, the Revegetation Plan will be prepared for each phase of the Project and will, at a minimum, include the following elements:

- A description of the site, including soil types, the stream environment zones and backshore type, and existing vegetation;
- A list of appropriate plant species to be used at the site and a plan showing where they will be planted;
- The number and size of shrubs and trees to be used, if any;
- Specifications for site preparation and installation of plan materials;
- Specifications and schedule for onsite care and protection, including the amount and method of application of fertilizers, if necessary; and
- A description of mulches or tackifiers to be used.

Wildlife

**Less than Significant Impact with Mitigation Incorporated.** The Project would have a less than significant effect on any riparian habitat or sensitive natural community identified in Local or regional plans, policies, regulations or by the CDFG or USFWS. Construction activities would mostly occur within the previously developed urban areas of Kings Beach, CA. SEZ improvements to Griff Creek would occur within habitat that has been identified as emphasis habitat for willow flycatcher by the LTBMU, and are within the 0.5 mile northern goshawk nest buffer established by the TRPA. However, the encroachment of these habitats would be relatively short term and temporary during construction. Implementation of the Project would provide long term improvements to the species that utilize the area by greatly improving habitat.

While willow flycatcher are not currently present within the Project area, potential impacts to habitat of this species within the Griff Creek SEZ would include ground disturbance activities as the result of the use of heavy equipment. These activities may result in disturbances to potential willow flycatcher habitat. However the disturbance would be temporary, affecting only those portions of the emphasis habitat occurring downstream (south) of Griff Lane. Any adverse effects would be minimized through implementation of Mitigation Measure BIO-4.

The Project would not physically disturb habitat (tree removal) related to the northern goshawk during construction of improvements to Griff Creek. The construction activities would be performed within an established urban area (along Griff Lane, and Northshore Blvd/SR 267). However, noise resulting from construction activities could have an adverse effect on habitat and nesting northern goshawks. Mitigation Measure BIO-2 would be implemented in order to reduce noise impacts within the established TRPA 0.5-mile nest buffer to less-than-significant.

**c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**Less than Significant Impact with Mitigation Incorporated.** As noted previously, the potential wetlands in the Griff Creek SEZ have not been formally determined nor delineated per USACE guidance. The design of the Project has avoided construction within or adjacent to the potential wetland sites. Mitigation Measure BIO-7 will be implemented to ensure that no significant adverse effect on wetland habitat occurs as a result of implementation of the Project.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

**Less than Significant Impact.** The Project would have a less than significant impact with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites with mitigation incorporated. Most Project activities would occur within the already established urban environment of Kings Beach, which is highly unlikely to contain suitable migration corridors, wildlife nursery sites, or impede movement to native species throughout the area. Therefore, permanent interference with movement of migratory species would not result from implementation of the Project.

Construction activities related to the Griff Creek SEZ would occur during low stream flows, which would coincide with conditions that preclude lake-run trout from migrating up Griff Creek.

Construction activities in the Griff Creek SEZ would not dominate large portions of the SEZ. Wildlife could easily circumvent the construction activities; therefore interference with wildlife migration through the Griff Creek SEZ would be less than significant.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**No Impact.** The TRPA Code of Ordinances (Chapter 71.2A) prohibits cutting of any live, dead or dying tree greater than or equal to 30 inches diameter at breast height (dbh) in westside forest types on lands classified by TRPA as conservation, recreation or SEZ (TRPA 1987). Both recreation and SEZ lands apply to the Project area. The trees proposed for removal under the Project are less than 30 inches dbh; therefore, adverse effects are avoided.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**No Impact.** No habitat conservation plan, natural community conservation plan or other approved local, regional, or state habitat conservation plan governs lands within the Project boundary.

## 4.5.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure BIO-1** - Prior to commencement of Project activities, the Project proponent shall consult with the LTBMU biologist to verify that no new California spotted owl nests are present within 0.25 mile of the Project area. If an active nest is identified a 0.25 mile buffer shall be delineated around the nest site and a Limited Operating Period (LOP) [6] shall be instated from March 1 to August 15 to reduce noise impacts originating from any portion of the Project area that falls within the buffer zone.

**Mitigation Measure BIO-2 -** Prior to commencement of Project activities, the Project proponent shall consult with the LTBMU biologist to verify that no new northern goshawk nests are present within 0.25 mile of the Project area. If an active nest is identified, a 0.25 mile buffer shall be delineated around the nest site and a Limited Operating Period (LOP) shall be instated from February 15 to September 15 to reduce noise impacts originating from any portion of the Project area that falls within the buffer zone.

[6] A Limited Operating Period constitutes a period during which project activities would not occur and is enforced in project implementation contracts. For California spotted owl, the LOP is between March 1 and August 31. For willow flycatcher, the LOP is between June 1 and August 31For northern goshawk, the LOP is between February 15 and September 15.

**Mitigation Measure BIO-3** - Prior to commencement of Project activities, the Project proponent shall consult with the LTBMU biologist to verify the status of both Sierra Nevada yellow-legged frogs and northern leopard frogs within the Project area. A qualified biologist shall be on site during any streambed altering activities to monitor for the presence of frogs and shall implement standard management practices for the protection of individuals discovered within Project affected areas.

**Mitigation Measure BIO-4** - No willow flycatchers were detected during the 2007 protocol level surveys. Additional protocol level surveys for willow flycatcher shall occur between May and July of the first year of construction, prior to any construction activities. If an active nest is identified, a buffer zone within suitable habitat shall be delineated around the nest site and a Limited Operating Period (LOP) shall be applied from June 1 to August 31 for any portion of the Project area that falls within the buffer zone.

**Mitigation Measure BIO-5** – Prior to completion of final design for the Project, the Project biologist shall conduct a protocol-level survey for Tahoe yellow cress, consistent with the guidelines provided in the *Conservation Strategy for Tahoe Yellow Cress* (Pavlik et al. 2002). The protocol requires annual surveys between June 15 and September 30. The project biologist shall also conduct a survey just prior to construction to insure that no plants have become established. Surveys will include beach and associated backshore segments that will be disturbed by Project activity. All information will be recorded on Tahoe yellow cress Plant Survey Forms and provided to Nevada Natural Heritage Program (NNHP) and California Natural Diversity Database (CNDDB). If plants are found to be present and potentially affected by Project activities, the following mitigation measures will be implemented to ensure less-than-significant impacts to this species: 1) to restrict access, sites will be fenced and signs posted; 2) if necessary, Project design will be modified to avoid disturbing established plants.

**Mitigation Measure BIO-6** – Construction documents shall include an Invasive Weed Management Plan which includes best management practices regarding the use of equipment to insure control of invasive species.. In addition, seed mixes and mulch shall be certified as weed-free (including cheat grass, mullein and bull thistle), and mycorrhizae shall be used to enhance the establishment of native plants. The LTBMU botanist shall also survey the Project every year during Project construction and for three years following completion to insure the Invasive Weed Management Plan is being carried out by the Contractor. See also the mitigation measures outlined in the Noxious Weed Risk Assessment prepared for this Project [see Appendix B of Appendix D (BA/BE)]. Occurrences of bull thistle must be reported to Placer County Department of Agriculture.

**Mitigation Measure BIO-7** – Prior to finalization of Project designs, the potential wetland habitats in the Griff Creek SEZ will be surveyed in accordance with agency guidance, and the Project design will be modified as needed to avoid construction within delineated wetland areas or other direct impacts to wetlands (i.e., increased discharge of sediments). Temporary fence will also be erected as appropriate to avoid disturbance of any wetland habitat during Project construction.

**Mitigation Measure BIO-8** – Any vegetation disturbed, or removed, will be re-seeded, re-planted and/or restored to the pre-project condition through the revegetation plan associated with the Project design plans. Vegetation within the creek, and adjacent areas, will be salvaged as much as possible (dependent on its condition) and will additionally be restored to SEZ conditions through the vegetation plan, during the design process.

# 4.6 Cultural Resources

## 4.6.1 Existing Conditions

The Lake Tahoe Basin has been an area of continual human occupation for approximately 9,000 years. Therefore, prehistoric resources are potentially present along the shore of Lake Tahoe, including within the Project area. The Project area is located on the north shore of Lake Tahoe, in an area of longtime recreational use and development. The area was initially developed as the Kings Beach Resort in the 1920s, and recreational development has continued since that time. The Project area is a developed, mostly residential area, and has been highly disturbed from roadway, drainage, and building construction activities. Therefore, the Project area has little surface integrity, and the potential for undisturbed cultural resources is low.

Staff at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) conducted a record search for the Project area on July 2, 2007. The record search also included a ¼-mile radius outside the Project area. The search consisted of a review of:

- National Register of Historic Places (NRHP) (2006);
- California Register of Historic Resources (CRHR) (2006);
- California Historical Landmarks (1996);
- California Points of Historical Interest (1992);
- Caltrans Bridge Inventory (1987 and 2000);
- Historic GLO Maps (1865 and 1875); and
- California Inventory of Historical Resources (1976).

Records showed that 14 previous archaeological surveys have been conducted within the Project area and vicinity.

Sixty-three properties in the CCIP area were evaluated in the *Kings Beach CCIP EA/EIR/EIS* (Placer County 2008), six of which were determined to contain structures eligible for inclusion in the NHRP, with concurrence from the SHPO. Detailed documentation regarding those properties is provided in The *Kings Beach CCIP EA/EIR/EIS* (incorporated herein by reference).

With regard to the Project area outside the CCIP, one (1) prehistoric site and two (2) historic sites are located within the Project area, according to the NCIC. The one recorded prehistoric site, CA-PLA-1258, consisted of a bedrock mortar, indicating the area was used for food preparation. This feature is not easily visible as it is almost entirely buried in the ground. The bedrock mortar and the site have been affected by grading. Regardless, the site may yield information important in prehistory (e.g., occupation and use of the area by Washoe) and appears to meet eligibility Criterion (d) for inclusion in the NRHP and Criterion (4) for inclusion in the CRHR. The site indicates occupation of the area and the possibility of additional resources in the area. Visible ground surfaces surrounding the feature were examined for the presence of additional historic or prehistoric archaeological site indicators, but no additional heritage resources were discovered. Subsurface investigations were not conducted.

The two historic sites are associated with recreational development of the area in the early to mid-1900s. Historical resource CA-PLA-1929-H is a 1920s flagstone walkway associated with the original Kings Beach Resort. The walkway has been incorporated into the public park and pier. It was determined ineligible in 2001 by Ronald L. Reno of Harding ESE (Reno 2001) because it "...does not have sufficient integrity of design, workmanship, feeling, and association... ." Historic resource

CA-PLA-1257 is a storage tank support structure and associated pipes and pavement. It was determined ineligible by Ronald L. Reno of Harding ESE (Reno 2002) due to severe degradation.

A pedestrian survey of the Project area was conducted in July 2007 in accordance with NHPA Section 106 guidelines which fulfills NEPA requirements. All visible ground surfaces were examined for the presence of historic or prehistoric archaeological site indicators. No new heritage resources were discovered in the Project area.

The Project area does not have any reported existing religious or sacred uses. This determination was made based on the extensive research performed by MACTEC Engineering and Consulting in 2005 for the *Kings Beach CCIP EA/EIR/EIS* (Placer County 2008). Consultations for that effort consisted of the following:

- Mr. Brian Wallace, Chairperson for the Washoe Tribe of Nevada and California was contacted by letter on June 15, 2005. Mr. Wallace was contacted by phone on December 8, 2005. A phone message was left, requesting that he call if he had any concerns about the (CCIP) project.
- Mr. William Dancing Feather, Cultural Coordinator for the Washoe Tribe of Nevada and California, was contacted by letter on June 15, 2005, with a follow-up email on September 12, 2005. Vickie Clay (MACTEC) briefly discussed the (CCIP) project with Mr. Dancing Feather on November 4, 2005, at which time he saw no issues with the project.
- Ms. Rose Enos was contacted by letter on September 12, 2005. During a follow-up phone call on December 8, 2005, she related that she had no concerns unless burials were encountered during construction. She asked to be immediately notified if burials were encountered.
- The Native American Heritage Commission was contacted by letter on August 22, 2005. Ms. Debbie Pilas-Treadway, Environmental Specialist III, replied on September 2, 2005. A records search of the sacred lands file failed to indicate the presence of Native American cultural resources in the immediate area. The NAHC provided a contact list with the names and addresses of three individuals with possible further knowledge of cultural resources in the project area.
- Placer County Historical Society was contacted by letter on August 22, 2005, with a follow-up email on September 13, 2005; Nevada Historical Society June 2001; North Lake Tahoe Historical Society June 2005.

Furthermore, Mr. Daryl Cruz (Tribal Historic Preservation Officer for the Washoe Tribe of Nevada and California) was contacted as part of the Indian Trust Assets investigation for this Project (see Section 4.12 for discussion on Indian Trust Assets). The focus of the communication was to determine if tribal land rights such as hunting, fishing and water rights exist in the Project area. Mr. Cruz stated he was not aware of any such rights in the Project area, and raised no concerns with regard to tribal uses, including religious or sacred uses (WTNC 2008).

Additionally, during the Project's public meetings (Section 7, Consultation and Coordination), no concerns were introduced by the public or native American representatives.

## Regulatory Setting

A cultural resource may be designated as historic by Federal, state, or local authorities. The National Historic Preservation Act of 1966, as amended, (16 USC 470f) establishes policy and procedures for the preservation of historic properties throughout the nation. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on properties listed in or meeting the criteria for the NRHP and afford the Advisory Council on Historic Preservation the opportunity to comment on such undertakings. Implementing regulations are codified at 36 CFR 800. The NRHP lists districts, sites, buildings, structures, and objects that have been determined to be culturally significant. The NRHP is maintained and expanded by the

National Park Service on behalf of the Secretary of the Interior. The Office of Historic Preservation in Sacramento, California, administers the statewide NRHP program under the direction of the State Historic Preservation Officer (SHPO).

CEQA Guidelines require that the Project consider the significance of the undertaking's impacts on historic remains and archaeological sites determined to be historical resources under CEQA Section 15064.5. To properly evaluate the significance of impacts on such resources it is necessary to evaluate each resource in terms of the site significance criteria contained in the CEQA Guidelines. Generally, a resource shall be considered to be "historically significant" by the lead agency if the resource meets the criteria for listing on the CRHR (Public Resources Code SS5024.1, Title 14 CCR, Section 4852). CEQA Guidelines include criteria to determine if a cultural resource is considered historically significant. Significant historic resources are defined as: 1) resources that are listed on or eligible for listing on the California Register of Historical Resources (CRHP) and/or the National Register of Historic Places (NRHP); 2) resources designated as locally significant; or 3) resources a Lead Agency determines are significant based on substantial evidence. However, CEQA Guidelines state that a resource need not be listed to be considered significant in regard to CEQA analysis (§15064.5(a) (4)).

The TRPA Goals and Policies and Code of Ordinances guide and regulate the recognition, protection, and preservation of the Tahoe region's significant historical, archaeological, and paleontological resources by requiring projects and activities to evaluate the effects of their proposed actions on those resources. The Conservation element of the Goals and Policies states that "historical or culturally significant landmarks in the basin shall be identified and protected from indiscriminate damage or alteration" (TRPA 2004b). This includes protection during construction. Chapter 29 of the Code of Ordinances expands on the Goals and Policies, and sets standards for resource protection, discovery, evaluation, and management. Chapter 64 (Grading Standards) of the Code sets requirements in the event of discovery of cultural resources during grading activities.

The potential effects of the Project on such resources are evaluated herein, in compliance with the regulations and policies summarized above.

## 4.6.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| CULTURAL RESOURCES<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Substantially cause adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5? | | | | X |
| b) Substantially cause adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5? | | X | | |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | X |
| d) Have the potential to cause a physical change which would affect unique ethnic cultural values? | | | | X |
| e) Restrict existing religious or sacred uses within the potential impact area? | | | | X |
| f) Disturb any human remains, including these interred outside of formal cemeteries? | | | | X |

**a) Would the Project substantially cause adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5?**

**No Impact.** The Project area has two historical resources as described above. Neither is considered historically significant, therefore no special protections are required; regardless, the Project will deliberately avoid them. Both of these features are easily visible, and no Project elements are planned within 10 meters (33 feet). Therefore, no adverse effect (i.e., disturbance or destruction) on the features would occur as a result of implementation of the Project.

Three of the six eligible properties evaluated in the *Kings Beach CCIP EA/EIR/EIS* (Placer County 2008) are located at the outside edge of the CCIP boundary, which puts them adjacent to the Project's boundary; however, all of the structures on those properties are at least 10 meters (33 feet) distant from planned Project elements. Therefore, Project activities will not impact those structures.

Subsurface investigations were not conducted for this Project, therefore, unanticipated subsurface discoveries could occur during construction. To address this possibility, Placer County requires all construction contractors to adhere to a set of standard construction BMPs which stipulate that, in the event any historic, archaeological (including human remains), paleontological, or unique geologic materials or features are uncovered during construction activities, all work must stop in the immediate area of the discovered resource and the contractor(s) must immediately inform the Placer County lead engineer of the discovery, followed by written notification . The County in turn will contact a qualified archaeologist (and the County Coroner in the case of human remains), at the County's expense, to inspect the discovery and determine appropriate measures to take, which could include archaeological excavation or modification of the Project design. These requirements address the potential for impacts related to encountering unknown cultural resources.

**b) Would the Project substantially cause adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines, Section 15064.5?**

**Less than Significant Impact with Mitigation Incorporated.** The Project area has one recorded archaeological resource, CA-PLA-1258, an isolated bedrock milling feature. Site CA-PLA-1258 appears to meet eligibility Criterion (d) for inclusion in the NRHP and Criterion (4) for inclusion in the CRHR. No Project elements are planned within 10 meters (33 feet) of this feature, which is far enough for Project activities to avoid it. However, because it is not easily visible (buried), it could unintentionally be affected by ancillary construction activities. Avoidance of the resource is the preferred action; therefore, Mitigation Measure CUL-1 will be implemented to ensure no impact will occur to CA-PLA-1258.

If previously unknown resources are encountered, the Project will follow standard procedure as described in response (a) above.

**c) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**No Impact.** The Project area is not reported to contain unique paleontological resources or unique geologic features that could be encountered by Project activities. The geologic materials (i.e., Tertiary volcanic bedrock and Holocene lake and alluvial sediment) within the Project area have not been reported to contain fossils (University of California 2008). No unique geologic features (e.g., outcrops of unique rock types or unusual geologic phenomenon) have not been observed or reported within the Project area.

If previously unknown resources are encountered, the Project will follow standard procedure as described in response (a) above.

**d) Would the Project have the potential to cause a physical change which would affect unique ethnic cultural values?**

**No Impact.** The Project area does not have any reported unique ethnic cultural values, therefore no mitigation measures would be required.

**e) Would the Project restrict existing religious or sacred uses within the potential impact area?**

**No Impact.** The Project area does not have any reported existing religious or sacred uses. The Project would not restrict those uses and, therefore no mitigation measures would be required.

**f) Would the Project disturb any human remains, including these interred outside of formal cemeteries?**

**No Impact.** The Project area is not reported to contain burials, and because of the highly disturbed condition of the area, potential for unrecorded burials is low.

If previously unknown remains are encountered, the Project will follow standard procedure as described in response (a) above.

### 4.6.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure CUL-1** – Prior to construction, a 10-meter (33-foot) buffer surrounding site CA-PLA-1258 will be delineated with temporary "environmentally sensitive area" (ESA) fencing to protect the resource. The fencing will remain until completion of construction activities in the area.

# 4.7 Environmental Justice

All projects requiring a federal action, such as federal funding for the Project, must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Executive Order 12898 directs federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal activities on minority and low-income populations. Low income is defined based on the Department of Health and Human Services poverty guidelines.

No segment of the population would be disproportionately impacted by construction. The community may experience impacts from construction such as traffic and transit service delays and increased noise and dust. A bilingual public information campaign will inform both the English and Spanish speaking residents of upcoming delays and potential disruptions. High and adverse impacts to the local low-income and minority populations are not expected. More details on traffic impacts are covered in Section 4.19. Construction noise impacts are covered in Section 4.15 and construction air quality impacts are covered in Section 4.4. The evaluation of the potential effects of the Project is applied to all segments of the population equally and no activities proposed by the Project would differentially affect a minority or low-income population. All environmental effects associated with the Project would be reduced or eliminated.

# 4.8 Geology and Soils

## 4.8.1 Existing Conditions

### Geology

Lake Tahoe occupies a basin formed by downward block faulting (i.e., forming a graben) during uplift of the Sierra Nevada two to three million years ago (Tobisch et al. 1987). The normal faults that characterize the style of faulting in Tahoe basin are derived from a branch of the Sierran Frontal Fault system. East of Lake Tahoe, the Walker Lane fault zone is defined as a broad zone of distributed shear west of the basin and range province and east of the Sierra Nevada. The Lake Tahoe basin is the largest of the fault controlled basins along the western edge of the Walker Lane fault zone (Kent et al. 2005). The basin is bounded by the Sierra Nevada block on the west and the Tahoe-Carson Range to the east. The lake is underlain by the Sierra Nevada igneous rocks and younger metamorphic rocks. Burnett (1968) mapped andesitic volcanic rocks along the north and northwestern areas surrounding the lake, and Quaternary glacial deposits along the south and southwest portion of the basin (Gardner, et al. 2000).

The Project area is located at Kings Beach on the margin of the northern shore of Lake Tahoe. The topography of the Project area slopes gently southward from the base of the upland areas to the north to the edge of the lake. The lake margin is directly underlain by Holocene (less than 11,000 years old) lake deposits. The lake margin is bordered on the north by upland areas underlain by Tertiary volcanics (Saucedo 2005).

These lake sediments were deposited during fluctuation of the lake level of Lake Tahoe. Streams transecting the lake deposits have deposited alluvial and fluvial sediments. Subsurface data collected during the sampling of exploratory borings indicate that the sediments are predominantly dense silty sand (MACTEC 2003b). Groundwater levels are generally shallow (ranging between 2.5 to 9 feet below the ground surface). Data collected from monitoring wells within the Project site indicate that the groundwater flow direction is toward the lake.

### Soils

Soil mapping by the Natural Resource Conservation Service (NRCS 2008) has identified six mapping units, or distinct soil types, within the Project area. The mapping unit of the central portion of the area is the Kings Beach stony, sandy loam. This soil is developed on fine-grained lake and alluvial sediments and is moderately well drained. Fine-grained subsoils limit the capacity to transmit water. These cohesive subsoils have a relatively high shrink-swell potential (i.e., high linear extensibility).

The eastern margins of the site that are underlain by volcanic bedrock are mapped as three mapping units of Jorge cobbly sandy loam, distinguished by three slope angle classes (5-15, 15-30, and 30-50 percent). The Jorge soils are well-drained and have a moderately high capacity to transmit water. The expansiveness of the soil is low. The northern portion of the site and area along the Griff Creek channel are mapped as Tahoma-Jorge complex which are well drained. Although the upper horizons within the soil have a relatively coarse texture, less permeable lower horizons limit the capacity to transmit water and have high linear extensibility (i.e., shrink-swell potential). The westernmost portion of the site along the margin of Lake Tahoe is mapped as Beaches.

### Seismicity

The Project area is located within seismically active region. Recent investigations of the tectonic and seismic conditions within the Lake Tahoe region indicate the potential for moderate to large earthquakes that may generate strong to very strong seismic shaking in the Project area. The West Tahoe and North Tahoe-Incline Village Faults are considered active and capable of generating magnitude (M) 7 or greater earthquakes (Schweickert et al. 2004). An additional significant seismic

source in the vicinity of the Project area is the Genoa Fault. This fault forms the eastern boundary of the Carson Range and is considered capable of generating large (M 7.2-7.5) earthquakes. The probability of an M 7 earthquake occurring within the next 50 years in the South Lake Tahoe area has been estimated by the Nevada Earthquake Safety Council to be between 10 and 12 percent (NESC 2007). The California Geological Survey estimates that the maximum expected ground acceleration within the next 50 years in the Project area to be 0.3 to 0.4 g (acceleration of gravity) (CGS 2003). The perceived shaking at this level of ground motion would be very strong to severe (i.e., Modified Mercalli Intensity VII to VIII).

Recent mapping below the lake surface demonstrates three major fault strands within the Lake Tahoe basin have actively displaced sediments on the lake floor. These faults are, from west to east, the West Tahoe fault, Stateline fault (also called the North Tahoe fault), and Incline Village fault. Vertical deformation across the fault traces ranges between 10 to 15 meters (33 to 50 feet). The offset along the Stateline fault occurs across landslide debris generated approximately 60,000 years ago (Kent, et al. 2005). The results of this research indicate the potential for occurrence of a M 7 earthquake with a recurrence interval of 3,000 years.

The faults described above have not been identified as active under the Alquist-Priolo Earthquake Fault Zoning Act. The Act classifies faults as active if substantial evidence of ground rupture within the last 11,000 years (i.e., Holocene Epoch) is available. Currently the California Geological Survey has not zoned the faults as active under the Act. However, recent and on-going geologic research in the Lake Tahoe Basin is improving the understanding of the local faulting and seismicity.

## Regulatory Setting

Under the Alquist-Priolo Earthquake Fault Zoning Act, the State of California defines an "active" fault as a fault which exhibits evidence that surface rupture has occurred within the last 11,000 years (i.e., Holocene activity). Under the Act, the state has identified active faults within California and has delineated "earthquake fault zones" along active faults. This act restricts development of structures for human habitation within the earthquake fault zones to reduce the potential for injuries and damage caused by fault rupture. The Project site is not within an A-P Earthquake Fault Zone.

The State of California passed the Seismic Hazard Mapping Act in 1990. The act was passed to reduce the potential impacts to public health and safety and to minimize property damage caused by earthquakes. The act established a requirement for the identification and mapping of areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground-shaking. The act requires site-specific geotechnical investigations to identify potential seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy within the Zones of Required Investigation. A Seismic Hazard Zone Map for the area of the Project has not yet been published. Therefore, no specific state regulations related to geologic or soils conditions would apply to the Project. However, the design and construction of all improvements would be required to conform with the provisions of the California Building Standard Code which is codified in Title 24 of the California Code of Regulations.

The Land Use Element of the TRPA Goals and Policies document includes the following goal related to geologic conditions and hazards:

- *Goal #1 Risks from natural hazards (e.g., flood, fire, avalanche, earthquake) will be minimized.*

The goal is supported by a policy that requires regulation of development within identified avalanche or mass instability hazard areas. The Project is not located within an identified avalanche or mass instability area. In addition, the TRPA Code includes requirements for grading operations to reduce the potential for erosion and sedimentation (Chapter 64) and protection of vegetation during

construction (Chapter 65). Attachment Q of the Code presents standard conditions for grading projects which include requirements for best management practices for erosion control.

## 4.8.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| GEOLOGY AND SOILS<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | X |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | X |
| ii. Strong seismic ground shaking? | | | | X |
| iii. Seismic-related ground failure, including liquefaction? | | | | X |
| iv. Landslides? | | | | X |
| b) Result in substantial soil erosion or the loss of topsoil? | | X | | |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | X | | |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | | X |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | | | | X |

**a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?**

**No Impact.** No structures for human occupancy are proposed by the Project. Structures proposed by the Project are surface and shallow subsurface drainage system components. Therefore, the potential for increasing the exposure of people to harm related to unstable earth conditions is non-existent.

i. The potential for fault rupture at the Project site is low to negligible. The Project is not within or near any designated Earthquake Fault Hazard Zone. Although recent research indicates the potential for moderate to large earthquakes on fault zones within the Tahoe Basin, the faults in the area are not recognized a "active" under the A-P Earthquake Fault Zoning Act. Additionally, the Stateline fault , the closest of the recently investigated potentially active faults, is 0.7 miles east of the Project site.

ii. The State of California has not produced a Seismic Hazard Zone Map for this area. However, structures may be subject to light to moderate seismic shaking within the lifespan of the Project. During such an event, the structures may experience damage. Liquefaction can occur when saturated, loose, granular soils are subjected to intense or prolonged shaking. Seismic induced shaking of loose, saturated soils is the most likely cause of liquefaction.

iii. Subsurface investigations within the Project area indicate that Quaternary lake sediments (predominantly silty sand) underlie the area. Groundwater levels within the area are shallow (generally less than 10 feet below the ground surface). The California Geological Survey guidance for evaluation of liquefaction hazards (CDMG 1999) indicates, that areas containing soils of latest Pleistocene age (11,000 to 15,000 years before present) where groundwater is less than 20 feet below the surface and the expected peak ground acceleration is greater than 0.3g is considered a "liquefaction hazard zone". The Project area generally meets these conditions. Although a potential for liquefaction is indicated, the sediments at the site have been characterized as dense (MACTEC 2003b), limiting the potential for liquefaction. Therefore, the potential for liquefaction is considered low under expected seismic conditions.

The Project structures would be designed in accordance with the current seismic design requirements of the California Building Code, limiting the potential for damage during seismic shaking. Additional mitigation to limit the potential effects of seismic ground shaking and related effects is not required.

iv. The topography is flat to gently sloping throughout the Project area. No evidence of significant land sliding or other slope failures have been observed at the Project area. The site is not in the path of any known landslides. Therefore, implementation of the Project would not occur within an area of unstable slope and would not be expected to cause any increase in the potential for landslides.

**b) Would the project result in substantial soil erosion or the loss of topsoil?**

**Less than Significant Impact with Mitigation Incorporated.** The Project would be located in an urbanized area. Most of the natural surface has been disturbed during the construction of buildings and infrastructure. Topsoil has been removed or covered in these areas. The primary objective of the Project is to reduce the potential for erosion and sedimentation through the construction of improvements to the storm water drainage system. The Project would increase infiltration of runoff by installing infiltration devices, decreasing the volumes and rates of runoff and the potential for erosion.

During construction of the Project, temporary exposure of soil to erosion would be expected. Under implementation of the Project, approximately 9664 cubic yards of material would be excavated and managed. Appropriate erosion control measures shall be implemented following grading standards set forth by TRPA Code of Ordinances, Chapter 64. These may include limiting construction to the dry season, installing erosion control devices, removal or disposal of excavation spoils off-site at a location approved by TRPA. Additionally, the erosion hazards would be mitigated by the requirements for preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), including provisions for sediment control best management practices. The SWPPP would include, at a minimum, descriptions of best management practices to ensure the following:

- Prevention of debris, soil, organic material, or other foreign materials entering water courses or stream environment zone (SEZs);
- Prevention of erosion of construction areas by runoff and runon (i.e., direct surface drainage away from excavations and construction areas);
- Minimization of areas of disturbance of soil;
- Location of stockpiled soil/sediment away from water courses or SEZs;
- Stabilization of potentially unstable slopes;
- Revegetation of exposed soils as early as feasible;
- Prevention of long-term exposure of disturbed soils to wind or water erosion; and

Retention of existing vegetation to the extent feasible to minimize exposed soil.

**c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**Less than Significant Impact with Mitigation Incorporated.** Implementation of the Project would require construction of subsurface structures, including storm drains, infiltration trenches, and other Project appurtenances. The excavations for the installation of some structures would extend to depths below the groundwater table. The subsurface materials include silty sand and sand which may be unstable when saturated. The excavations below the water table may require dewatering and trench stabilization. The potential for liquefaction caused by earthquakes during construction is considered low due to density of the sediments, the expected shaking intensity, and the low probability of occurrence during the short-term construction period. The caving or collapse of excavations within saturated, unconsolidated sediments presents a hazard to the safety of workers and the stability of adjacent buildings or other improvements (including pavements). Impacts caused by excavation instability would be reduced to less than significant by implementation of Mitigation Measures GEO-1 and GEO-2.

**d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**No Impact.** No structures are proposed which would be adversely affected by expansion or contraction of soil.

**e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

**No Impact.** The Project does not propose the construction of any waste water treatment facilities (i.e., septic systems or sanitary sewers).

## 4.8.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure GEO-1.** The contract specifications shall require the contractor to prepare and implement an Excavation Safety Plan. The Plan shall identify the methods for excavation stabilization (e.g., trench shoring) for all excavations and demonstrate compliance with all federal, state, and local regulations.

**Mitigation Measure GEO-2.** The Storm Water Pollution Prevention Plan (SWPPP) required to the Project shall include, at a minimum, description of best management practices ensure the following:

- Prevention of debris, soil, organic material, or other foreign materials entering water courses or stream environment zone (SEZs);
- Prevention of erosion of construction areas by runoff and runon (i.e., direct surface drainage away from excavations and construction areas);
- Minimization of areas of disturbance of soil;
- Location of stockpiled soil/sediment away from water courses or SEZs;
- Stabilization of potentially unstable slopes;
- Revegetation of exposed soils as early as feasible;
- Prevention of long-term exposure of disturbed soils to wind or water erosion; and
- Retention of existing vegetation to the extent feasible to minimize exposed soil.

**Mitigation Measure GEO-3.** All groundwater removed from excavations (i.e., dewatering effluent) shall be managed according to TRPA Code of Ordinances Chapter 64 and Lahontan RWQCB "Project Guidelines for Erosion Control" and applicable Waste Discharge Requirements. All dewatering effluent shall be applied to the ground surface under controlled management to permit infiltration into the subsurface and prevent runoff of effluent to storm drains or stream channels. The SWPPP required for the Project shall, at a minimum, include the following best management practices:

- Provisions for the storage of pumped groundwater;
- Methods for sampling and testing of water quality prior to discharge conforming to Lahonton RWQCB permitting requirements (including but not limited to Board Order R6T-2004-2005);
- Methods for off-site disposal (including identification of disposal site), if applicable; and
- Conformance with excavation requirements of the Uniform Building Code and Chapter 64 of the TRPA Code of Ordinances.

## 4.9 Growth Inducing Effects

The Project would result in modifications and upgrades to existing storm water conveyance and treatment facilities. Additionally, the Project would provide for improvements to the stability and natural hydrologic function of existing stream channels. The Project would not directly increase the capacity of the existing storm water system. The modified drainage system will improve the environmental effects of operation of the existing facilities through enhancement of treatment of storm water runoff currently generated under existing conditions. The improvements would be integrated into the natural and constructed drainage system and restore some components of the natural stream function.

The potential for increased growth within the Project area would not result as a consequence of implementation of the Project. The components of the Project would enhance treatment of storm water generated in the Project area but would not increase the capacity of the existing system. The Project improvements would not create substantial amenities that would stimulate an increase in the growth of the area.

# 4.10 Hazards and Hazardous Materials

## 4.10.1 Existing Conditions/Affected Environment

The Project area includes urbanized areas of the community of Kings Beach. For purposes of this assessment, known and potential sites of hazardous materials are identified by the American Society for Testing and Materials (ASTM) definition of "recognized environmental conditions." The conditions are defined as "the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the soil, groundwater or surface water of the property" (ASTM, n.d.).

Recognized environmental conditions within the vicinity of the Project area were researched in local, state, and federal regulatory databases (EDR 2008). In addition to the database search, historical and current aerial photographs, Sanborn Fire Insurance Maps, and topographic maps were analyzed to evaluate the potential presence of recognized environmental conditions within the Project area. Additional site-specific information was obtained from data presented in investigations completed for the Commercial Core area of Kings Beach (MACTEC 2006; Kleinfelder 2006).

Sites with recognized environmental conditions within the Kings Beach Project area are shown on Figure HAZ-1. The regulatory database search identified multiple sites within the Project area or the area within ¼ mile of the outside of the Project area, including sites with soil and groundwater known to be contaminated with petroleum hydrocarbons.

### Underground Storage Tanks

The reviewed regulatory agency data identified 46 locations containing registered underground storage tanks (UST) and aboveground storage tanks (AST) within 1.5 miles of the Project area. 30 of the sites are currently listed as active or potentially active (i.e., under regulatory investigation). Seventeen sites identified in the registered UST and AST lists have been identified as having reported release incidents and thus appear on the leaking underground storage tank (LUST) database. These LUST sites (Table HAZ-1) are reported to have caused recognized environmental conditions to the soils and/or groundwater in the Project area.

The remaining locations containing registered underground storage tanks (UST) and aboveground storage tanks (AST) (Table HAZ-2) have not been reported as having caused contamination of soil and groundwater. These sites have the potential, however, to cause degradation of soil, groundwater, or surface water with hazardous substances.

Thirty-five of the UST/AST sites are in the Project area; thirteen of those are LUST sites.

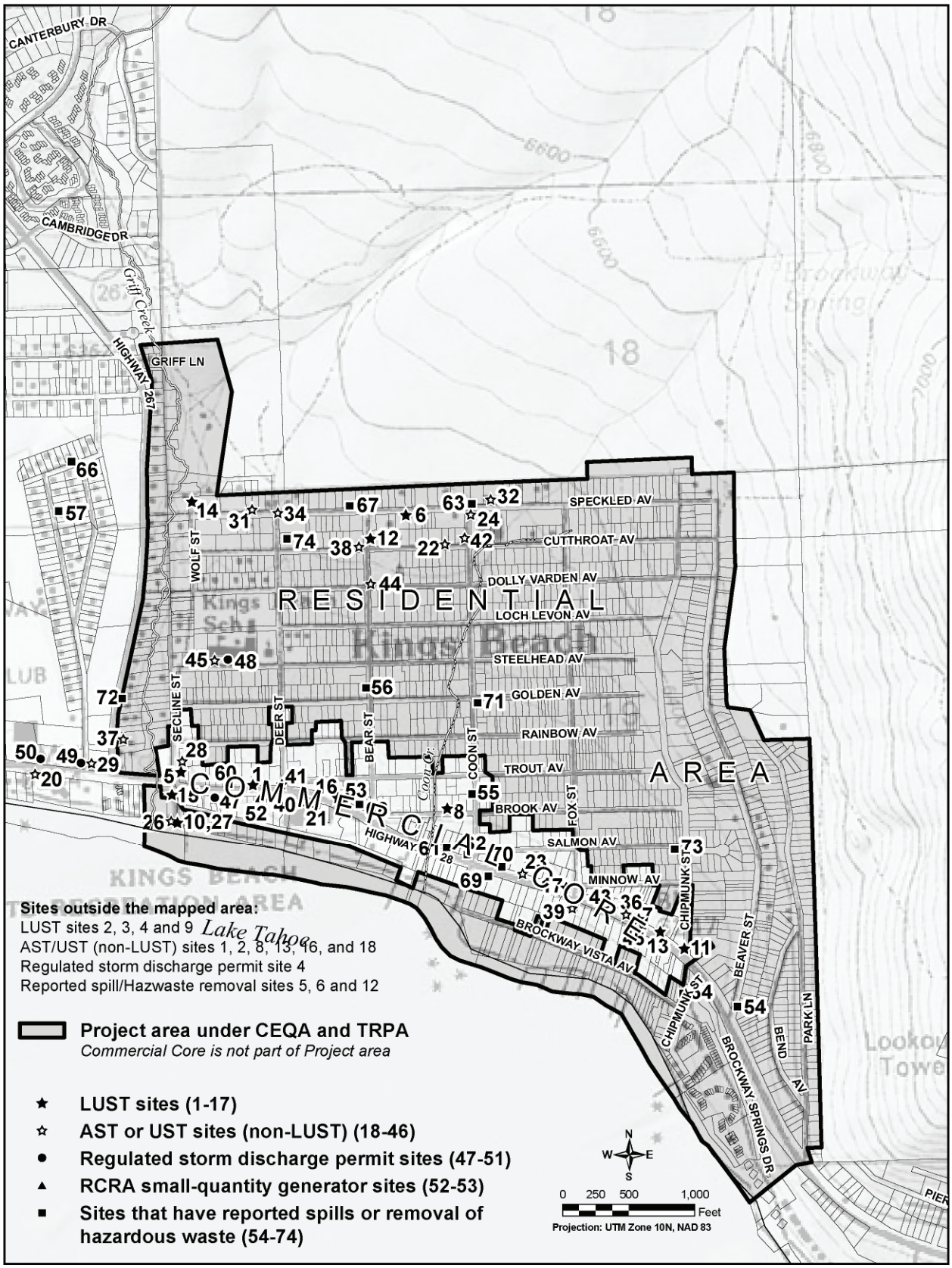


**Figure HAZ-1. "Recognized environmental conditions" sites in the Project vicinity.**

**Table HAZ-1. Identified LUST Sites**

| SITE NAME (PROPERTY #) | ADDRESS | REPORT DATE | LUST STATUS/TANK STATUS | CONTAMINANTS OF CONCERN AND SUMMERY |
|---|---|---|---|---|
| Ann's Cottages (1) | 8199 N. Lake Blvd. | 4/26/2006 | Closed/Inactive | Diesel groundwater contamination. |
| Sierra Pacific Power Co. (2) | 7001 National Ave. | 6/20/2005 | Remedial Action Underway | Gasoline and MTBE contamination. Groundwater monitoring underway. |
| North Tahoe PUD Lift Station (3) | 7010 N. Lake Blvd. | 12/16/2003 | Closed/Unknown | Diesel and MTBE groundwater contamination |
| North Tahoe PUD Maintenance (4) | 875 National Ave. | 7/9/2004 | Closed/Inactive | Gasoline and MTBE contamination of groundwater |
| Ken's Tire Center (5) | 8001 N. Lake Blvd. | 8/4/1986 | Closed/Inactive | 5 USTs removed and 2 closed in-place. Petroleum hydrocarbons contamination of soil and groundwater. |
| Fairway Excavating (6) | 8472 Speckled Ave. | 12/11/2002 | Closed/Active | 3 UST removed in 1999 along with 60 CY of TPH-gas and diesel impacted soils. 2 USTs removed in 2000. |
| Kings Beach Car Wash / Former Kings Beach Texaco (7) | 8755 N. Lake Blvd. | 9/5/1990 | Closed/Unknown | 3 UST removed in 1987. Waste oil contamination of soil. |
| Smith Building / Brook Street Apartments (8) | 8537 Brook Ave. | 7/5/2002 | Remedial Action Underway/Inactive | Heating oil tank removed in 1996. Diesel contamination of soil and groundwater near shed identified in 1999. |
| Tahoe Vista Marina (9) | 7220 N. Lake Blvd. | 6/21/2001 | Closed/Inactive | Gasoline and MTBE groundwater contamination |
| Secline Sewer Station (10) | 141 Secline | 4/19/2002 | Closed/Active | Diesel and MTBE groundwater contamination |
| Kings Beach Swiss Mart / Former Kings Beach Chevron (11) | 8797 N. Lake Blvd. | 1/26/2004 | Remedial Action Underway/Unknown | 3 USTS and 534 tons of hydrocarbon impacted soils removed in 2000. Active vapor extraction and groundwater pump and treat/carbon stripping is occurring prior to discharge to sewer. 31 monitoring wells. Petroleum hydrocarbons and benzene present in soil and groundwater. |
| Tom Tuhey's Auto & Truck Repair (12) | 712 Bear St. | 4/6/2007 | Pollution Characterization/Unknown | Gasoline and MTBE contamination detected in soil |
| Ronning Property / Former Chevron service station (13) | 8784 N. Lake Blvd. | 11/4/2004 | Leak being confirmed/Unknown | Diesel contamination in soil and groundwater. |
| DGB Development, Inc. (14) | 710 Wolf St. | 8/14/2000 | Closed/Temporarily Inactive | Gasoline and MTBE soil contamination. Excavated. |
| TransAm / Former Beacon Service Station/ North Tahoe Mobil (15) | 8070 N. Lake Blvd. | 6/27/1983 | Remedial Action Underway/Unknown | Under remediation since 9/98. 3 recovery wells pump groundwater through 5 200-lb granular activated carbon containers. Effluent discharged to sewer pump station on Secline St. 17 monitoring wells. Petroleum hydrocarbon and MTBE in soil and groundwater |
| Chevron Station/ Former Kings Beach Shell Station (16) | 8369 N. Lake Blvd. | 6/22/2006 | Remediation Plan/Unknown | Gasoline and MTBE groundwater contamination |
| Kentucky Fried Chicken / Former Union 76 (17) | 8697 N. Lake Blvd. | Unknown | Closed/Inactive | Groundwater contamination. UST may have been removed or closed in place. |

**Table HAZ-2. Identified AST and UST Sites (non-LUST)**

| SITE NAME (PROPERTY #) | ADDRESS | STATUS | SITE SUMMARY |
|---|---|---|---|
| Van Dyne & Sons Roofing (18) | 1001 Commonwealth Dr. | Closed | AST and/or AST on site |
| Kingswood Village P.O.A. (19) | 1201 Commonwealth Dr. | Closed | AST and/or AST on site |
| North Tahoe PUD (20) | 7860 N. Lake Blvd. | Closed | AST and/or AST on site |
| North American Fire Extinguisher Co. (21) | 8325 N. Lake Blvd. | Closed | AST and/or AST on site |
| Burdick Excavating Co. (22) | 8555 Cutthroat Ave. | Closed | AST and/or AST on site |
| North Tahoe Village (23) | 8645 N. Lake Blvd. | Closed | AST and/or AST on site |
| Tahoe Investment Properties (24) | Coon St./Speckled Ave. | Closed | AST and/or AST on site |
| James C. & Marion A. Jordan (25) | 398 Gull | Active | UST on site |
| Secline Sewer Pump House (26) | 8072 Secline St. | Active | UST containing diesel on site |
| North Tahoe PUD (27) | 141 Secline | Active | AST and/or AST on site |
| North Shore Hardware (28) | 200 Secline St. | Active | AST and/or AST on site |
| Old Brockway Golf Course (29) | 400 Brassie Ave. | Active | AST and/or AST on site |
| North Tahoe PUD (30) | 7496 N. Lake Blvd. | Active | AST and/or AST on site |
| Yankton Excavating Inc. (31) | 8229 Speckled Ave. | Active | AST and/or AST on site |
| Thompson's Yard (32) | 8619 Speckled Ave. | Active | AST and/or AST on site |
| Brockway Hot Springs (33) | 9510 Brockway Springs Dr. | Active | AST and/or AST on site |
| Sierra Pacific Power Co. (34) | Deer/Speckled | Active | AST and/or AST on site |
| North Tahoe Marina (35) | 7360 N. Lake Blvd. | Active | UST/AST on site |
| Pacific Bell 203 (36) | 8739 N. Lake Blvd. | Active | UST |
| North Tahoe Fire Protection District (37) | 288 N. Shore Blvd. | Temp. Closed | UST containing diesel on site |
| Meinzer Residence (38) | 8395 Cutthroat Rd. | Unknown | UST containing petroleum |
| Subway Store/Former Arco Service Station (39) | 8700 N. Lake Blvd. | Closed | USTs closed in place |
| North Tahoe PUD (40) | 8318 N. Lake Blvd. | Active | UST containing diesel on site |
| Dave's Ski Shop/Former Mobil Service Station (41) | 8299 N. Lake Blvd. | Closed | USTs removed |
| Kings Beach Linen & Drycleaner (42) | 615 Coon St. | Closed | Drycleaner business, chlorinated solvents previously used on site |
| Lake Tahoe Specialty Stove & Fireplace./Former dry cleaner business (43) | 8731 N. Lake Blvd. | Active | AST/UST on site. Chlorinated solvents previously used on site. |
| Hans Ramelow (44) | 675 Bear St. | Closed | AST/UST on site. |
| Kings Beach Elementary School (45) | 8125 Steelhead | Closed | AST/UST on site. |
| Texaco - Kings Beach (46) | 8775 N. Lake Blvd. | Closed | AST/UST containing gasoline, diesel, and waste oil |

## Stormwater Discharge Permit Sites

Sites within the Project area that have regulated stormwater discharge permits are summarized in Table HAZ-3. Stormwater discharges from these sites are generally considered non-hazardous to human health. However, disruptions to these permitted discharges due to construction or operational activities of the proposed Kings Beach Watershed & SEZ Improvement Project could produce adverse water quality and environmental conditions. These sites are depicted on Figure HAZ-1.

**Table HAZ-3. Identified Sites with Regulated Stormwater Discharge Permits**

| SITE NAME (PROPERTY #) | ADDRESS | SITE SUMMARY |
|---|---|---|
| North Shore Ace Hardware (47) | 8079 N. Lake Blvd. | Regulated stormwater discharge |
| Kings Beach Elementary School (48) | 8125 Steelhead | Regulated stormwater discharge |
| Old Brockway Golf Course (49) | 7900 N. Lake Blvd. | Regulated stormwater discharge |
| North Tahoe Marina (50) | 7360 N. Lake Blvd. | Regulated stormwater discharge |
| Kings Beach Safeway (51) | N. Lake Blvd. | Regulated stormwater discharge |

## RCRA Small Quantity Hazardous Waste Generators

The Resource Conservation and Recovery Act (RCRA) database is maintained by the EPA to identify facilities involved in the transportation; generation; or treatment, storage, and disposal (TSD) of hazardous waste. The list identifies TSD facilities within the Project area that generate hazardous waste, facilities that have had enforcement actions taken against them as a result of a RCRA violation, and facilities that are undergoing RCRA corrective action(s). A RCRA small quantity generator (sqg) is one that generates between 100 and 1,000 kilograms per month of non-acute hazardous waste, or generates per month or accumulates at any time less than one (1) kilogram of acute hazardous waste (MACTEC 2006). Small quantity generators within the Project area are summarized in Table HAZ 4 and shown on Figure HAZ-1.

**Table HAZ-4. Identified RCRA Small Quantity Generators**

| SITE NAME (PROPERTY #) | ADDRESS | SITE SUMMARY |
|---|---|---|
| Rite Aid 6106 (52) | 8245 N. Lake Blvd. | Small quantity hazardous waste generator |
| Kings Beach Shell (53) | 8369 N. Lake Blvd. | Small quantity hazardous waste generator |

## Reported Spills Sites

Sites within the Project area that have reported spills and/or disposals of hazardous substances are identified in Table HAZ-5 and shown on Figure HAZ-1. Although no contamination of soil, groundwater, or surface water with hazardous substances is reported to currently exist on these sites, there is the possibility that past activities have resulted in hazardous conditions.

**Table HAZ-5. Other Sites that Have Reported Spills or Removals of Hazardous Substances**

| SITE NAME (PROPERTY #) | ADDRESS | REPORT DATE | CONTAMINANTS OF CONCERN AND SUMMARY |
|---|---|---|---|
| Unknown (54) | 206 Beaver St. | 11/9/2001 | 2 5-gal buckets of motor oil abandoned on property. One tipped and spilled. |
| Unknown (55) | 241 Coon St. | 6/7/1994 | Gas leak by backhoe severed line at residence |
| Unknown (56) | 441 Bear ST. | 9/14/2001 | 2 drums on property possibly containing kerosene and water |
| Unknown (57) | 612 Brassie Ave. | 2/7/2004 | Sewage leak |
| Unknown (58) | 7600 N. Lake Blvd. | 8/15/2004 | Sewage leak |
| Unknown (59) | 7851 Lincoln Green | 2/19/2004 | Sewage leak |
| Unknown (60) | 8095 N. Lake Blvd. | 10/9/2004 | Sewage leak |
| Unknown (61) | 8561 N. Lake Blvd. | 8/17/2004 | Sewage leak |
| Unknown (62) | 8599 N. Lake Blvd. | 4/27/1989 | Unknown |
| Unknown (63) | 8601 Speckled | 8/1/1999 | Hydraulic fluid spill from boat |
| 1X Brockway Springs POA (64) | 101 Chipmunk St. | Unknown | Asbestos waste removed and disposed in landfill |
| Mr. Jack Raviglio (65) | 7650 N. Lake Blvd. | Unknown | Asbestos waste removed and disposed in landfill |
| George Abel (66) | 7893 Mashie St. | Unknown | Empty 30+ gal. containers disposed at recycler |
| Royce Furniture (67) | 8384 Speckled Ave. | Unknown | Oxygenated solvents disposed at recycler |
| Tahoe Crafts Printing (68) | 8393 N. Lake Blvd. | Unknown | Liquids w/ halogenated compounds disposed at transfer station |
| California Tahoe Conservancy (69) | 8608 N. Lake Blvd. | Unknown | Inorganic solid waste disposed at transfer station |
| North Shore Chiropractic (70) | 8611 N. Lake Blvd. | Unknown | Photochemicals/photoprocessing waste disposed at recycler |
| Unknown (71) | 8600 Golden Ave. | Unknown | Unknown |
| NTPUD Sewer (72) | 440 N. Shore Blvd. | 2/15/1992 | Sewer main break, 2000 gallons release on land and into Griff Creek |
| Unknown (73) | 8870 Salmon St. | 12/6/1998 | No Detail Available |
| Sierra Pacific Power Kings Beach Generators (74) | Deer Street | 6/1/1996 | Diesel fuel and additives leaked due to tank overfill. Soil was removed from site. Site is closed |

## Historic Map Review

Historical topographic maps of the Project area were obtained (EDR 2008) for the years 1895, 1940, 1955, 1969, and 1992 to identify past structures, facilities, or activities that may have occurred within the vicinity of the Project area and may have resulted in "recognized environmental conditions." A summary of the information interpreted from these photos is as follows:

- 1895 – Settlement of the Kings Beach area has not yet occurred, but a limited road network has been established in the area. A sawmill along present day Highway 267 indicates logging and timber processing activities in the area.
- 1940 – The present day Kings Beach area is beginning to be developed with structures located along the State Route 28.
- 1955 – Kings Beach has been developed with streets in a configuration similar to existing conditions. The Commercial Core has been developed along with the Brockway Golf Course to the west.

- 1969 – Development along the Commercial Core and to the north along State Route 267 has increased.
- 1992 – Minimal significant change in development since 1969.

A search of the available Sanborn Fire Insurance Maps for the Project area was performed (EDR 2008). The search concluded that no fire insurance maps are available for the Project area.

### Historic Aerial Photograph Review

Historical aerial photographs of the Project area were obtained the years 1952, 1962, 1973, 1987, 1992, and 1998 (EDR 2008). These photos were preliminarily analyzed to identify past structures, facilities, or activities that may have occurred within the vicinity of the Project area and may have resulted in recognized environmental conditions. A summary of the information interpreted from these photos is as follows:

- 1952 – Kings Beach has been developed with streets laid out in much the way they exist today. The Commercial Core has been developed along with the Brockway Golf Course to the west. Parcels within the residential area of Kings Beach are being developed but are largely vacant.
- 1962 – Development has increased along the Commercial Core as well as within the residential areas to the north. Several service station sites along Highway 28 identified as having reported spills or released (Table HAZ-1; Figure HAZ-1) are visible.
- 1973 – Minimal change. Kings Beach is largely built-out.
- 1987 – Minimal change.
- 1992 – Minimal change.
- 1998 – Minimal change.

### Recent Hazardous Materials Assessment

A Phase II Environmental Assessment of the Commercial Core area within and adjacent to the Project area was recently completed (Kleinfelder 2006). As part of this investigation, 15 soil borings were advanced to depths of 10-feet BGS in the right-of-way in front of eight parcels, and soil samples were collected for petroleum hydrocarbon and lead analysis. The eight parcels analyzed where as follows:

- TransAm (Former Beacon Service Station/North Tahoe Mobil) – 8070 N. Lake Blvd.
- Dave's Ski Shop (Former Mobil Service Station) – 8299 N. Lake Blvd.
- Chevron Station/ Former Kings Beach Shell Station – 8369 N. Lake Blvd.
- Kentucky Fried Chicken/Former Union 76 Station – 8697 N. Lake Blvd.
- Subway/Former Arco Station – 8700 N. Lake Blvd.
- Lake Tahoe Specialty Stove & Fireplace – 8731 N. Lake Blvd.
- Ronning Property (former Chevron service station) – 8784 N. Lake Blvd.
- Kings Beach Swiss Mart (former Kings Beach Chevron) – 8797 N. Lake Blvd.

The results of this assessment indicate that petroleum hydrocarbons are present to depths of 5.0 feet within the right-of-way adjacent to all parcels investigated with the exception of the Chevron Station/Former Kings Beach Shell Station and Dave's Ski Shop. At the Chevron/Shell site, soils containing petroleum hydrocarbons were encountered at depths below 8 feet. Soils within the right-of-way adjacent to Dave's Ski Shop contained petroleum hydrocarbons to depths of 2.0 to 3.0 feet. Results indicate that all samples were non-hazardous with respect to lead (Kleinfelder 2006).

## Additional Environmental Concerns

Other potential recognized environmental conditions within the Project may include hazardous levels of chromium and lead (lead chromate) attributable to yellow traffic markings (thermoplastic and paint). If yellow traffic markings are removed separate from the pavement, they may have to be treated as hazardous waste (Placer County 2008b).

Aerially deposited lead (ADL) has been identified along California State Highways. Soils adjacent to these highways may contain hazardous levels of lead due to the historical use of leaded gasoline. Most ADL would have been deposited prior to 1986. Caltrans performs sampling of soils for ADL at projects that have a peak average daily traffic volume of 10,000 or greater. Traffic volumes on some roads within the Project area exceed this volume (Jones & Stokes 2007). Sampling performed within the Commercial Core indicates that lead levels in soils range from 2.8 to 25 milligrams per kilogram (2.8 to 25 ppm) (Kleinfelder 2006). The U.S. Environmental Protection Agency's standard for lead in bare soil in play areas is 400 ppm by weight and 1200 ppm for non-play areas (USEPA 2001). The soil screening level for lead represents a conservative estimate for a level that would be protective of public health in residential soils based on an analysis of the direct ingestion pathway for children.

There is potential for un-registered USTs to exist within the Project area that have been or are being used for heating oil storage (MACTEC 2006). Hazardous subsurface conditions may be encountered during Project construction due to unidentified USTs.

Past construction activities within the Project area likely included the use of and possible release of diesel fuel, hydraulic fluid, and other hazardous substances used in construction equipment that have the potential to impact human health or the environment.

## Regulatory Setting

### The Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III and the CAA of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. The CAA (codified in 40 CFR Part 68.100 et seq.) requires the states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. SARA identifies requirements for planning, reporting, and notification concerning hazardous materials.

### Clean Water Act

The Spill Prevention Control and Countermeasures plan (SPCC) was developed as one of the many requirements of the Clean Water Act (CWA). Requirements of SPCCs are provided in Title 40, CFR, Part 112. SPCCs are intended to reduce the threat of spills of hydrocarbons to navigable waters of the United States.

### Resource Conservation and Recovery Act (42 USC. Section 6922)

The Resource Conservation and Recovery Act (RCRA) establishes requirements for the management of hazardous wastes from the time of generation to the point of ultimate treatment or disposal. Section 6922 requires generators of hazardous waste to comply with requirements regarding record keeping practices that identify quantities of hazardous wastes generated and their disposition, labeling practices and use of appropriate containers, use of a manifest system for transportation, and submission of periodic reports to the USEPA or authorized state.

### Title 40, Code of Federal Regulations, Part 260

These sections contain regulations promulgated by the USEPA to implement the requirements of RCRA as described above. Characteristics of hazardous waste are described in terms of ignitability, corrosivity, reactivity, and toxicity and specific types of wastes are listed.

### Title 22 of the California Code of Regulations

Title 22 of the California Code of Regulations (CCR), Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered a hazardous waste if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe chemical burns or damage to materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including RCRA hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

## 4.10.2 Project Issue Analysis

Project construction will occur near existing hazards but the Project will not create new hazards nor add to existing hazards. The following analysis was conducted based upon the EDR database search, the ISA of the Commercial Core performed by MACTEC (MACTEC 2006), the Phase II Environmental Assessment of the Commercial Core by Kleinfelder, (Kleinfelder 2006), and an analysis of historical aerial photographs and topographic maps as described earlier.

The Project was evaluated for the following potential issues:

| HAZARDS AND HAZARDOUS MATERIALS<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | | X | | |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | X | | |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | X | | |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | | X | | |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project area? | | | | X |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project area? | | | | X |
| g) Impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan? | | | X | |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | X | | |

**a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less than Significant Impact with Mitigation Incorporated.** The Project proposes construction and operation of improvements to the existing storm water conveyance and treatment facilities at Kings Beach. No hazardous materials would be used or stored for operation of the Project facilities and, therefore, the Project would not result in any new hazard to the public or the environment relative to existing conditions. However, construction of the Project will include short-term use of diesel fuel, hydraulic fluid, and other hazardous substances used in the operation and maintenance of construction equipment. These substances have the potential to spill and create conditions that are hazardous to the public or the environment. Yellow traffic markings containing heavy metals and lead may be removed from the existing roadway during construction activities. Additionally, operation of the Project may require the periodic clean out of sediment traps, filter vaults, and other Project appurtenances. Materials recovered from these features may contain limited quantities of substances that have the potential to become hazards to the public or the environment. Implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce to less-than-significant these Project impacts.

**b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**Less than Significant Impact with Mitigation Incorporated.** The Project will not cause or add to any existing hazards, but soils and groundwater contaminated by hazardous materials have been identified within the Project area. Construction of the Project may require the excavation and disposal of contaminated soils as well as the removal of contaminated groundwater. Installation of storm drains, infiltration trenches, and other Project appurtenances may affect groundwater flow in the Project area or create preferential groundwater flow pathways. These features have the potential to increase the mobility of known hazardous substances located in the soils and groundwater beneath the Project area. Additionally, exposure of contaminated soils may result in the transport of hazardous substances through windblown particulates.

Implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce to less-than-significant Project impacts related to construction of within or adjacent to hazardous materials.

Two RCRA small quantity generator sites have been identified within the Project area. These sites store and occasionally transport small quantities of hazardous waste. Construction activities would not significantly disrupt the transport of these hazardous wastes because there are sufficient alternate routes within the community. Furthermore, a standard Traffic Management Plan (see Mitigation Measure TRANS-1 in Section 4.19) will reduce the potential for collisions or other Project-related traffic accidents to less than significant.

**c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**Less than Significant Impact with Mitigation Incorporated.** One school is located within the Project area, Kings Beach Elementary School, located at 8125 Steelhead Avenue. Construction activities will occur within ¼ mile of this site. No known sites containing hazardous substance releases are located within one quarter mile of the school. Therefore, it is not probable that hazardous soil or groundwater will be encountered in the vicinity of the school during construction activities. Nonetheless, the Project may uncover previously unknown hazards during construction; implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce such impacts to less than significant.

**d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**Less than Significant Impact with Mitigation Incorporated.** Soils and groundwater impacted by hazardous materials have been identified within the Project area. Construction of the Project may require the excavation and disposal of contaminated soils as well as the removal of contaminated groundwater from parcels with known contamination. Furthermore, installation of storm drains, infiltration trenches, and other Project appurtenances may affect groundwater flow in the Project area or create preferential groundwater flow pathways. These features have the potential to increase the mobility of known hazardous substances located in the soils and groundwater beneath the Project area. Additionally, exposure of contaminated soils may result in the transport of hazardous substances through windblown particulates.

The investigation of recognized environmental conditions within the Project area identified unregistered USTs as a potential concern because many homes and other buildings have historically used oil for heating. These USTs would be located several feet below the ground surface and outside of the right-of-way. Because the majority of the work proposed will occur within the public right-of-way and/or on or near the ground surface, these unidentified USTs represent a less than significant impact.

The investigation of recognized environmental conditions within the Project area identified unregistered ADL as a potential concern. The Phase II Environmental Assessment conducted within the Commercial Core area in 2006 by Kleinfelder did not find any significant hazards associated with lead in this area. Therefore, ADL exposure caused by Project activity would be considered a less-than-significant impact.

Several sites with government regulated storm water discharges are located within the Project area. Disruptions to these permitted discharges due to construction or operational activities of the Project could result in adverse water quality and environmental conditions.

Implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce to less-than-significant any Project impacts related to construction within or adjacent to known hazardous materials sites.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project area?**

**No Impact.** The nearest airport to the Project area is the Truckee Tahoe Airport located at 10356 Truckee Airport Road in Truckee, CA approximately 14 miles north-northwest of the Project site. The Project construction and operation activities are not located within the airport land use planning areas of this or any other airport. Therefore, there are no adverse aviation safety related effects anticipated for people residing or working in the Project area.

**f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project area?**

**No Impact.** The nearest airport to the Project area is the Truckee Tahoe Airport located at 10356 Truckee Airport Road in Truckee, CA approximately 14 miles north-northwest of the Project site. The Project construction and operation activities are not located within the airport land use planning areas of this or any other airport. Therefore, there are no adverse aviation safety related effects anticipated for people residing or working in the Project area.

**g) Would the project impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less than Significant Impact.** Construction of this Project will result in minor road lane closures, traffic detours, and construction-related traffic. These disruptions will not be significant enough to disrupt emergency access because there are sufficient alternate routes within the community grid. In addition, post-construction operation of the Project will not restrict or alter traffic or emergency response access compared to existing conditions within the Project area.

**h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**Less than Significant Impact with Mitigation.** Hot, dry summers in the Lake Tahoe Basin frequently result in natural and human induced wildfires. The boundary area between rural and urban areas is generally considered to present an increased risk of wildfire due to the close interaction between people and dense vegetation. Construction equipment and activities located within this urban/rural fringe have the potential to spark wildfires. A large portion of the Project area is urban land, but wildfire risk in portions of the Project area could be significantly increased due to construction activities. Post-construction Project operation will not increase wildfire fuel nor will it provide an ignition source for wildfires. Therefore, Project operation will not significantly increase the risk of wildfire. Mitigation Measures HAZ-5 and HAZ-6 have been developed to reduce the risk of wildfire posed by construction activities to less than significant.

## 4.10.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure HAZ-1** – Contract specifications for the Project require the contractors performing excavation work within or adjacent to known sites of hazardous materials releases to conform with all federal and state requirements for protection of worker health and safety and environmental protection during management of construction activities at hazardous materials sites. The Contractor shall be required to prepare a Health and Safety Plan (HASP) for all site personnel in accordance with the *29 CFR 1910.120*, the DTSC, and Cal-OSHA regulations. Additionally, the HASP shall include a Project-specific Lead Compliance Plan approved by an industrial hygienist certified in comprehensive practice by the American Board of Industrial Hygiene will be implemented in accordance with *CCR Title 8, Section 1532.1 (Title 8, "Lead").*

The HASP will include a plot plan depicting exclusion zones and clear zones as defined by *CCR, Title 26,* a schedule of procedures, sampling and testing procedures, and physical barrier requirements. The plan will be approved by a civil engineer registered in the State of California and by an industrial hygienist certified by the American Conference of Governmental Industrial Hygienists (ACGIH) and will then be submitted for review and acceptance by the Project Engineer at least 10 working days prior to beginning any excavation. Upon approval by the Project Engineer, the Contractor shall be required to comply with the provisions of the approved HASP. All personnel working within areas of confirmed or potential contamination will complete a safety training program that meets the requirements of the Contractor's HASP. The Contractor will provide the training and a certification of the safety training program to all personnel.

**Mitigation Measure HAZ-2** – Contract specifications require that the contractor(s) obtain an EPA hazardous waste generator identifier number (EPA ID#) for this Project. The EPA ID# shall be displayed on all containers holding hazardous waste. The waste will be stored within the Project limits and in a secure enclosure for no more than 90 days prior to disposal. Containers will conform to the requirements of the U.S. Department of Transportation for the transportation and temporary storage of the materials contained within and will be handled such that no spillage occurs. Labels will conform to the requirements of *CCR Title 22.*

**Mitigation Measure HAZ-3** – Contract specifications require that the contractor(s) to prepare a Storm Water Pollution Prevention Plan (SWPPP) as required by Mitigation Measure WQ-1. The SWPPP shall identify methods of the safe storage, use, and transport of any hazardous materials associated with construction activities. The information shall include, but not be limited to, the following:

- Identification of designated areas for storage of hazardous substances;
- Expected inventory of all hazardous substances transported to and used or stored at the site;
- Description of "good housekeeping" best management practices for the storage and use of hazardous substances;
- Description of hazardous substance spill response.

**Mitigation Measure HAZ-4** – During excavation activities in areas within 500 feet of known hazardous materials release sites, monitoring will be conducted for petroleum hydrocarbon contamination with a photo ionization detector (PID), combustible gas meter, or similar equipment as approved by Placer County. Work will stop immediately if suspected contamination is encountered, and the Project Engineer shall be notified immediately. Upon confirmation of contamination, the Project Engineer will assess the Project design and obtain the required approvals to modify the design to avoid conflicts with the contaminated material and/or any on-going or future remediation projects.

All encountered contamination will be addressed and handled appropriately, as described herein. Placer County will provide records regarding any contamination encountered during this Project to any appropriate requesting party. Appropriate requesting parties include, but are not limited to, the Lahontan Regional Water Quality Control Board, Placer County Health and Human Services – Environmental Health, any responsible party or potentially responsible party, or the designated environmental consultant to any responsible party or potentially responsible party.

All soil and groundwater materials removed during construction activities that have been deemed hazardous in accordance with the testing and sampling procedures shall be placed in labeled containers and disposed of appropriately in a manner following the procedures outlined in the HASP (see Mitigation Measure HAZ-2). Excavated soils that have been deemed hazardous will not be used as backfill material, and a water truck or other approved water spraying device will be on site at all times during excavation of hazardous or potentially hazardous materials to prevent particles from becoming airborne.

**Mitigation Measure HAZ-5** – All construction equipment that normally contains a spark arrester will be fitted with an arrester in good working order as required by Placer County in order to minimize this construction-related fire ignition source. Equipment to be fitted with spark arresters will include, but not be limited to, heavy equipment and chainsaws.

**Mitigation Measure HAZ-6** – Dry vegetation and other potential fire fuels located within construction area limits and near where any equipment will be operated will be cleared by the construction contractor as required by Placer County and to the extent feasible.

# 4.11 Hydrology and Water Quality

## 4.11.1 Existing Conditions

The Lake Tahoe Basin is comprised of 63 major watersheds, as defined by TRPA, which drain to Lake Tahoe. The watersheds that drain through the Project area are the Kings Beach watershed (852 acres) and the Griff Creek watershed (2,815 acres) (Figure 3). Griff Creek begins at Martis Peak and flows to the lake; it flows year-round, including the dry fall period. The Kings Beach watershed includes undeveloped forest and urban area; with several ephemeral watercourses.

Because watershed characteristics, such as land use, slope and soils, range greatly throughout the Kings Beach watershed, the watershed was divided into six "sub-watersheds" (Figure 3) to assess runoff characteristics more accurately. Each sub-watershed represents a continuous flow path from the surrounding forest to the lake. The sub-watersheds are summarized in the *Hydrologic Conditions Report* (Placer County 2006b). (A more detailed map showing existing drainage infrastructure and pollutant source areas is provided in Appendix F of the *Hydrologic Conditions Report).*

The upstream contributing area for each watershed is primarily undeveloped forestland with little or no impervious surface, while the downstream area is the urban area within the Kings Beach community. Stormwater from the upstream forest appears to be conveyed in defined channels or as overland flow. Griff Creek is the primary stream within the Project area. The creek channel is steep and the watershed has medium to high vegetation cover.

The downstream urban area is a mixture of paved and unpaved surfaces extending from State Route 267 on the west to Park Lane on the east, Speckled Avenue on the north and the Lake Tahoe shoreline on the south. The urban area includes the Residential Area and the Commercial Core. In addition, the urban area includes the Griff Creek SEZ and the Coon Street SEZ. Both SEZs are influenced by runoff from streets and Residential Areas.

Runoff from the urban area is conveyed in open ditches, curb-and-gutter roadway drainage and subsurface storm drains. The runoff is collected and conveyed under State Route 28 through a series of culverts and discharged to the lake. Pollutants are generated through soil erosion, road-sanding operations, application of fertilizer, and other urban activities (vehicle travel, pets, litter, garbage). In the past, several detention basins have been constructed within the urban drainage area to control runoff and pollutant discharge.

ENTRIX (Placer County 2006b) developed a PLRE-STS model of the Griff and Kings Beach watersheds to simulate the runoff that would result from various storm events. The simulation results for each sub-watershed are shown in Table HYD-1.

**Table HYD-1. Total Runoff Volume for Simulated Storms (acre-feet)**

| Sub-Watershed[a] | 2-Year / 1-Hour | 2-Year / 72-Hour | 25-Year / 1-Hour | 25 Year / 72-Hour |
|---|---|---|---|---|
| Griff Creek | 2.0 | 513.4 | 4.4 | 1770.4 |
| Deer | 1.0 | 13.8 | 2.4 | 36.2 |
| Bear | 0.5 | 26.0 | 2.1 | 73.0 |
| Coon | 1.0 | 62.7 | 3.6 | 171.8 |
| Fox | 0.9 | 13.5 | 2.6 | 39.9 |
| Beaver | 0.4 | 19.2 | 1.2 | 54.4 |
| Secline 1 | 0.1 | 4.4 | 0.2 | 9.5 |
| Brockway 1 | 0.0 | 2.1 | 0.1 | 4.7 |
| Brockway 2 | 0.1 | 4.4 | 0.3 | 9.6 |
| Fox 3b | 0.0 | 1.7 | 0.1 | 3.8 |
| Park 1 | 0.7 | 48.0 | 3.0 | 108.8 |
| Park 2 | 0.2 | 6.8 | 0.5 | 14.5 |

[a]Outlet refers to the total watershed contributing to Lake Tahoe. For example, Griff Outlet is the contribution of the entire Griff Creek watershed to the lake.

Pollutant loading was also analyzed in the *Hydrologic Conditions Report* (Placer County 2006b) using the SWQIC water quality spreadsheet. The results are summarized in Table WQ-1.

**Table WQ-1. Water Quality Loading Analysis**

| | Griff | Deer | Bear | Coon | Fox | Beaver | Park |
|---|---|---|---|---|---|---|---|
| Watershed Area (acres): | 2815.29 | 61.09 | 133.15 | 355.79 | 82.61 | 94.10 | 125.29 |
| | | | | | | | |
| **Pollutant Load produced by each sub-watershed (tons/year):** | | | | | | | |
| NO3 | 0.006 | 0.002 | 0.002 | 0.006 | 0.003 | 0.002 | 0.003 |
| TKN | 0.155 | 0.017 | 0.018 | 0.051 | 0.022 | 0.016 | 0.021 |
| SRP | 0.020 | 0.002 | 0.002 | 0.007 | 0.002 | 0.002 | 0.003 |
| TP | 0.052 | 0.011 | 0.009 | 0.027 | 0.014 | 0.010 | 0.010 |
| TSS | 6.889 | 3.804 | 2.733 | 7.666 | 4.670 | 3.006 | 3.136 |
| **Total:** | **7.122** | **3.836** | **2.764** | **7.757** | **4.711** | **3.036** | **3.173** |
| | | | | | | | |
| **Pollutant Load per acre (lbs/year):** | | | | | | | |
| **Total:** | **5.06** | **125.59** | **41.52** | **43.60** | **114.05** | **64.53** | **50.65** |

NO3=Nitrate+nitrite; TKN=Total organic nitrogen+ammonia; SRP=Soluble reactive phosphorus; TP=Total phosphorus; TSS=Total suspended solids

*Source: SWQIC 2004.*

As Table WQ-1 illustrates, the Coon and Griff Creek watersheds produce the most significant pollutant loads overall, while the Deer and Fox sub-watersheds produce the highest pollutant loads *per acre*. In all cases, most of the pollutant load is coming from the developed portions of the watersheds, with a relatively minor contribution from the undeveloped land upstream from Kings Beach (Harding ESE 2002; Placer County 2006b).

Groundwater monitoring well data from throughout the Project area was analyzed as a portion of the *Evaluating Alternatives Technical Memorandum* (Placer County 2006e). According to this evaluation, the groundwater table in the Project area is generally parallel to surface topography and groundwater flows towards Lake Tahoe to the south. Groundwater elevations range from approximately 2.5-feet below ground surface (BGS) to 9-feet BGS with elevations fluctuating from highs in the late winter and spring to lows in the summer and fall.

## Regulatory Setting

Enacted in 1972, the Federal Clean Water Act (CWA) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary Federal law regulating water quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. Enforced by the USEPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes states to adopt water quality standards and includes programs addressing both point and non-point pollution sources. It gives the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters, and established the National Pollutant Discharge Elimination System (NPDES).

Placement of fill or dredged material into surface waters can have significant impacts on surface water and groundwater, both in terms of hydrology and water quality. Thus, Section 404 of the CWA regulates the discharge of dredged and fill material into the Waters of the U.S., including wetlands. The term *Waters of the U.S.* refers to oceans, bays, rivers, streams (including non-perennial streams with a defined bed and bank), lakes, ponds, and seasonal and perennial wetlands.

Primary responsibility for environmental protection of the Lake Tahoe Basin rests with the California Regional Water Quality Control Board, Lahontan Region (LRWQCB) and the TRPA. The primary regulatory documents controlling effects on water resources are the LRWQCB Water Quality Control Plan for the Lahontan Region (Basin Plan) and the TRPA Water Quality Management Plan for the Lake Tahoe Region (208 Plan). The Basin Plan and 208 Plan outline water quality standards for surface and ground waters, the beneficial uses of waters and objectives that must be maintained or attained to protect those uses, and other environmental standards that must be achieved and maintained in the Lake Tahoe Basin. Additionally, the water quality of Lake Tahoe is currently designated by the State Water Resources Control Board as "impaired" under Section 303 of the Clean Water Act for elevated levels of suspended sediment.

The Project proposes improvements to the management and treatment of storm water runoff and would support the primary goals of the LRWQCB and TRPA for reducing pollutant loading to Lake Tahoe. The potential short-term effects of construction of the Project would be addressed through conformance with the National Pollutant Discharge Elimination System requirements of the Clean Water Act implemented by the LRWQCB under the State General Permit for Storm Water Discharges Associated with Construction Activities. The Project design and implementation (including best management practices) would conform to the water quality regulations.

The Regional Plan for Lake Tahoe Basin, Goals and Policies document, adopted by TRPA in 1986, includes goals and policies for the protection of water quality in the basin. The Land Use Element established the following goals for water quality:

Goal #1: Reduce loads of sediment and algal nutrients to Lake Tahoe; meet sediment and nutrient objectives for tributary streams, surface runoff, and sub-surface runoff, and restore 80 percent of the disturbed lands.

Goal #2: Reduce or eliminate the addition of other pollutants which affect, or potentially affect, water quality in the Tahoe Basin.

These goals are supported by numerous policies which are implemented through the TRPA Code of Regulations. Chapter 81 of the TRPA Code addresses measures to protect water quality, implementing the Water Quality Subelement of the Land Use Element of the Goals and Polices. The requirements of the Code pertinent to the Project include:

- Restrictions on discharges of runoff water that exceed maximum concentrations for specific constituents (including dissolved nitrogen, phosphorous, and iron, grease and oil, and suspended sediment);
- Restrictions on discharges to groundwater that exceed maximum concentrations for specific constituents (including total nitrogen and phosphate, iron, turbidity and grease and oil;
- Prohibition of wastewater discharge to Lake Tahoe or its tributaries;
- Prohibition of toxic or hazardous waste discharges to surface or subsurface waters;
- Regulation of use of salt and abrasives for control of ice on roads and parking areas;
- Spill control during handling, transport, use, and storage of hazardous substances; and
- Criteria for use of pesticides and fertilizers.

Chapter 82 of the TRPA Code establishes requirements for all projects which result in the creation of impervious surfaces. The Code sets required offsets for potential water quality impacts related to impervious cover including establishment of mitigation projects or payment into a water quality mitigation fund. The primary purpose of the proposed Project is to provide for improvement of existing storm water quality and is, therefore, a mitigation project.

Protection of drinking water sources is provided by the requirements of Chapter 83 of the Code. The requirements set restrictions for activities within designated "source water protection zones". The Project is not within a "source water protection zone" designated by TRPA.

The TRPA Code of Ordinances (Chapter 74) also provides protection for Stream Environment Zones. The Code states in paragraph 74.2 Protection of Stream Environment Zones that no SEZ shall be impacted adversely by altering vegetation. The Project includes restoration enhancements (including revegetation) to SEZs.

## 4.11.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| HYDROLOGY AND WATER QUALITY<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? | | X | | |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | | X |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | X | | |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | X | | |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | | X |
| f) Otherwise substantially degrade water quality? | | X | | |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | | X |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | | X | |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | | | | X |
| j) Cause inundation by seiche, tsunami, or mudflow? | | | | X |

### a) Would the Project violate any water quality standards or waste discharge requirements?

**Less than Significant Impact with Mitigation Incorporated.** The purpose of the Project improvements is to improve the quality of stormwater and snowmelt runoff from County roads through the use of infiltration, detention, and settling basins. Over the long term, water quality will improve. Construction activities however, have the potential of impacting water quality in the short-term.

Project construction-related activities may cause short-term water quality impacts during storm events. During construction, these would be a significant amount of grading and excavation; this may have a potential to cause minor erosion and sediment movement. This impact and appropriate mitigation is addressed in WQ-1 through WQ-5. Implementation of the mitigation measures would reduce the impact to a less-than-significant level.

**b) Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

**No Impact.** Proposed improvements will not adversely affect or interfere with groundwater recharge or cause a net deficit in aquifer volume or a lowering of the local groundwater table level. Some of the proposed improvements will spread flow to increase infiltration to the groundwater. The proposed improvements would increase the local water table elevation. However, no adverse effects on the surrounding water table or water quality are anticipated.

**c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less than Significant Impact with Mitigation Incorporated.** One component of the Project includes erosion control and stormwater management improvements. The Project would improve and control the drainage pattern of road and some surface runoff in the Project area. Flows previously conveyed on roadside shoulders and in ditches will be conveyed in concrete curb-and-gutter, grass-lined channels, or rock-lined channels. Replacement of roadside shoulders and ditches with concrete curb-and-gutter would alter the amount of surface run-off infiltration. However, the Project will create a net increase of infiltration through installation of treatment systems such as sedimentation basins, rock bowls, infiltration galleries, and sediment traps. Flows that historically have been discharged directly to the lake would be filtered through one or a combination of many treatment systems. Use of treatment systems would reduce siltation in natural drainages on and off site. The existing storm drain system will be retrofitted to accommodate changes in the drainage pattern. Changes to the drainage pattern would not result in on- or off-site flooding.

A second component of the Project includes geomorphic and hydraulic enhancement on Griff Creek. Construction of the improvements on Griff Creek would require two temporary diversions of the creek to dewater, remove existing culverts, and install new open arch culverts. Replacement of existing culverts with open arch culverts within the same footprint will not alter the course of Griff Creek. A small cofferdam will be installed upstream of the each culvert replacement area. Inflow would be diverted at the cofferdam into a bypass pipe that would carry flow around the culvert replacement site and discharge it back into Griff Creek downstream of the site. BMPs recommended and approved by federal, regional, state, and local regulatory agencies would be deployed to mitigate construction activity next to the stream channel. Mechanized equipment would be used to remove the road surface, fill, and existing culverts. A crane would be utilized for existing culvert removal. After existing culvert removal, a channel bottom would be shaped with a low flow channel. The open arch culverts would then be installed and the road repaired.

Placer County will apply for a Section 1602 Streambed Alteration Agreement with the California Department of Fish and Game for the culvert replacement as part of the fisheries enhancement work.

Construction-related activities for the creek enhancement work include diverting Griff Creek in two places, installing bypass pipe, removing existing culverts, and installing new open arch culverts. These activities could potentially cause erosion and impact water quality. This impact and appropriate mitigation is addressed in WQ-1 through WQ-5 which would reduce the impact to a less-than-significant level.

**d) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less than Significant Impact with Mitigation Incorporated.** See previous response.

**e) Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**No Impact.** Project goals are to treat urban stormwater run-off before it reaches Lake Tahoe, remedy existing drainage problems, and improve fish passage. It includes the installation of properly sized culverts and channels that will convey runoff where there is currently none. The Project would result in reduction of storm water discharge.

**f) Would the Project otherwise substantially degrade water quality?**

**Less than Significant Impact with Mitigation Incorporated.** The Project is a water quality improvement Project that will reduce pollution loading. In the short-term, there is the potential for an increase in pollutant loading from construction activities. This impact and appropriate mitigation is addressed below in WQ-1. Implementation of mitigation measures are expected to reduce any Project related water quality impacts to less than significant.

**g) Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No Impact.** The Project does not propose any housing or structures.

**h) Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**Less than Significant Impact.** Portions of the Project area (i.e., along the lower portions of Griff Creek, downstream of Speckled Avenue) are with 100-year flood hazard zones designated by the Federal Emergency Management Agency. The Project includes construction of improvements to the existing storm water collection and conveyance system and stream channels within the designated flood zone. However, the modifications to the system would not cause any adverse changes to flow within a 100-year flood hazard zone. The improved system would include relatively minor fills within the 100-year flood hazard zones [the proposed earthen berm along Griff Creek west of the Secline Street/Golden Avenue intersection (140 cubic yards)]. The volume of the fill within the flood zone would be offset by excavations proposed for the detention basins (3,200 cubic yards) and three areas of floodplain lowering (700 cubic yards). The net effect would be to increase flood storage capacity within the flood zone.

**i) Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**No Impact.** The Project elements would not redirect or retain enough water to cause significant loss, injury or death by flooding. There are no dams or levees within or upstream of the Project area.

**j) Would the Project cause inundation by seiche, tsunami, or mudflow?**

**No Impact.** The Project would not alter the physical environment in such a way that would increase the risk of inundation by seiche, tsunami, or mudflow. Structures for human occupancy are not proposed. The upgrades would not increase development within the areas of potential inundation by tsunami or seiches. The potential for the Project area to cause mudflows or other slope failures is negligible.

## 4.11.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure WQ-1 –** Placer County shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for construction BMPs and drainage plans for the Project in accordance with Tahoe Regional Planning Agency (TRPA) and Lahontan Regional Water Quality Control Board (LRWQCB) requirements for storm water pollution prevention. The Storm Water Pollution Prevention Plan (SWPPP), will include a Dust Suppression Plan, and Dewatering Plan to be submitted to TRPA and LRWQCB for review and approval. The SWWPP shall include, at a minimum, the following information:

- Identification of potential sources of pollutants (including known areas of known past releases of contaminants;
- Identification of existing drainage patterns and slopes;
- Method of protection for all storm water inlet points and/or discharge points to receiving waters;
- Identification of areas of soil or solid waste storage, construction vehicle storage, construction material loading/unloading, and equipment maintenance (if any);
- Description of BMPs for control of discharges related to waste handling and disposal;
- Description (including mapping of) of post-construction BMPs and identification of agency or party responsible for long-term maintenance of these BMPs;
- Inventory of all materials used with the potential to contribute to the discharge of pollutants;
- Identification of all BMPs to protect against discharges to Griff Creek or other stream environment zones. The alternatives for BMPs shall;
    1. Prevent silt, eroded materials, construction debris, concrete or washings thereof, or hazardous substances from being introduced into any watercourse, stream, or storm drain system;
    2. Provide for diversion of stream flows around construction areas within stream channels (e.g. temporary upstream diversion to pipeline with energy dissipation at flow return point);
    3. Ensure that storm water runoff does not cause erosion of exposed soil within stream environment (e.g., covering of exposed soil with mulch, fiber matting, or vegetation, stabilization of soil, and/or diversion of surface flow away from and around exposed areas near streams);
    4. Provide for monitoring of Griff Creek flows; in-stream (and diversion) activities shall take place when the creek is at base flow;
    5. Prohibit the stockpiling of soil, storage of hazardous materials, and stockpiling of construction materials in flood zones or SEZs during the rainy periods or during spring runoff; and
    6. Minimize the potential for any other discharge of soil or other material does not have an adverse effect on receiving waters or cause or contribute to a violation of water quality standards.

**Mitigation Measure WQ-2 –** Daily inspections will be conducted during construction on all existing BMPs in the Project area. Should any deficiencies be noted on an inspection log. Remedial actions by Placer County staff and/or the contractor shall be initiated immediately and also recorded on the inspection log. The inspection log shall be kept on-site and made available to inspection staff of permitting agencies, including TRPA and RWQCB.

**Mitigation Measure WQ-3 –** Placer County staff shall monitor weather reports on a daily basis during the construction period to notify the contractor of any forecasted adverse weather conditions and ensure the implementation of measures to prevent erosion and transport of sediment away from construction areas during storm events.

**Mitigation Measure WQ-4 –** As necessary and not less than three times per week, all dirt and mud that has been generated from or deposited by construction activities will be removed from all adjacent streets by street sweeping.

**Mitigation Measure WQ-5 –** Placer County will prepare a Sampling and Analysis Plan (SAP) to be included as part of the SWPPP. The SAP will identify water quality sampling locations and procedures to identify threats to water quality during storm events. The SAP shall include sampling and testing procedures for sediment and siltation as prescribed by the General Permit for Storm Water Discharges Related to Construction Activities (or as modified by the RWQCB).

# 4.12 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interest in assets held in trust by the United States government for federally recognized Indian tribes or individual Indians (USDOI 2000). Examples of trust assets are lands, minerals, hunting and fishing rights, and water rights. While most ITAs are on reservations, they may also be found off reservations. Federal agencies are required to take responsibility for protection and maintenance of ITAs.

Indian tribes in the region include: Pyramid Lake Paiute Tribe: Pyramid Lake Indian Reservation (which includes Pyramid Lake) in Nevada; Reno-Sparks Indian Colony: Reno and Hungry Valley, in Nevada; Fallon Paiute-Shoshone Tribes: Fallon Paiute-Shoshone Reservation and Fallon Colony in Nevada; and Washoe Tribe of Nevada and California: colonies of Carson City, Dresslerville, Stewart, Washoe Ranch (in Nevada) and Woodfords (in California), Pine Nut allotments (in Nevada), and cultural interests at and near Lake Tahoe (USDOI 2008). For this study, information about potential ITAs and ITA issues was obtained through telephone consultation with the US Bureau of Reclamation (Reclamation), the Bureau of Indian Affairs (BIA) and the Washoe Tribe of Nevada and California. There are no known Indian Trust Assets within or immediately adjacent to the Project area.

Indian Trust Assets downstream from Lake Tahoe (e.g., land rights, water rights, hunting and fishing rights) would not be adversely affected by the Project. The Project would generally have beneficial effects on water quality in Lake Tahoe and consequently on the Lower Truckee River.

No other effects/impacts identified for the Project would extend to downstream areas. Therefore, adverse effect/impacts to ITAs would not occur as a result of implementation of the Project.

# 4.13 Land Use and Planning

## 4.13.1 Existing Conditions/Affected Environment

Historically, Kings Beach has been one of the primary commercial and recreational centers in the Lake Tahoe Basin. Along the State Route 28 corridor, land uses are predominantly tourist / recreational and commercial. Adjacent to the commercial land is a mixture of single family and multi-family residences. Commercial land and open space lie between the highway and Lake Tahoe.

Current land use matches designated land use which consists of commercial, residential, public service, recreational, industrial, and resource management (TRPA 1996). Some open space parcels exist, most of which are owned by Placer County, the California Tahoe Conservancy (CTC), or the US Forest Service. Most of Kings Beach's local businesses, which include motels, restaurants, retail shops, and gas stations, are located along State Route (SR) 28, also referred to as the Commercial Core. Roughly one-quarter of the developed parcels in the Commercial Core contain closed businesses, demolished buildings, and vacant buildings for rent (Placer County 2008b).

Signs in the Tahoe Basin are regulated by the Tahoe Regional Planning Agency. Temporary construction site identification signs identifying the Project, the owner or developer, architect or designer, engineer, contractor, funding sources, and other related information are allowed once a permit for the Project is issued for the duration of the Project. Temporary signs for closures and warnings during construction are also allowed for the duration of a permitted Project (TRPA 2004).

Considered both a natural habitat conservation and natural community conservation plan, the Placer County Conservation Plan (PCCP) was adopted in 2005 in an effort to comply with the State and Federal Endangered Species Act, and to programmatically comply with the Federal Clean Water Act related to wetlands (Placer County Planning Department 2005). The PCCP only applies to the western portion of the county and, therefore, is outside the Project area. The Kings Beach Community Plan and Kings Beach Industrial Community Plans include the intention to restore the stream habitat and migratory fish habitat in Griff Creek from good to excellent (TRPA 1996a and 1996b). Chapter 7 of the Kings Beach Community Plan has both SEZ restoration goals and water quality improvement goals. The chapter specifically identifies the restoration of Griff Creek as a required and approved Project pursuant to the TRPA SEZ Restoration Program (TRPA 1996a).

The Kings Beach Community Plan also sets a target of 80 percent Best Management Practice (BMP) implementation, specifically referring to shoulder areas along SR 28 and backstreet areas and implementation a combination of revegetation, drainage, sidewalks, and adequate vehicle barriers. All of these BMPs are components of Project.

### Regulatory Setting

The regulatory setting for land use was previously described in Section 1.4 of this document.

Environmental threshold carrying capacities for the Lake Tahoe Region were determined in TRPA Resolution No. 82-11, adopted August 1982. The environmental threshold carrying capacity is defined as "an environmental standard necessary to maintain significant scenic, recreational, educational, scientific, or natural value of the region or to maintain public health and safety within the region" (TRPA 2004a). The adopted environmental thresholds address nine components of the environment of the Tahoe Region - water quality, soil conservation, air quality, vegetation preservation, wildlife, fisheries, noise, recreation, and scenic resources (TRPA 2004a). Although land use is not specifically identified in the regional plan as a threshold, in meeting the needs and goals identified as thresholds by the TRPA, the Project would contribute to the achievement of planning goals at the community and regional level.

## 4.13.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| LAND USE AND PLANNING<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? | | | | X |
| b) Conflict with General Plan/Community Plan/Specific Plan designations or zoning, or Plan policies? | | | | X |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan or other County policies, plans, or regulations adopted for purposes of avoiding or mitigating environmental effects? | | | | X |
| d) Result in the development of incompatible uses and/or the creation of land use conflicts? | | | | X |
| e) Affect agricultural and timber resources or operations (i.e. impacts to soils or farmlands and timber harvest plans, or impacts from incompatible land uses)? | | | | X |
| f) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)? | | | | X |
| g) Result in a substantial alteration of the present or planned land use of an area? | | | X | |
| h) Cause economic or social changes that would result in significant adverse physical changes to the environment such as urban decay or deterioration? | | | | X |

**a) Would the project physically divide an established community?**

**No Impact.** Although permanent erosion control features are proposed within an established community (Kings Beach), none of them are physical impediments to human travel and therefore would not divide an existing community.

**b) Would the project conflict with General Plan/Community Plan/Specific Plan designations or zoning, or Plan policies?**

**No Impact.** The General Plan/Community Plan/Specific Plan designations and zoning, and Plan policies allow for watershed improvements for erosion control, runoff control and SEZ restoration. Temporary construction signs are also allowed for the duration of the Project, if it is approved. The Project proposes watershed improvements and temporary construction signs that adhere to TRPA's Code of Ordinances and therefore would be in conformance with the plans and policies.

**c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan or other County policies, plans, or regulations adopted for purposes of avoiding or mitigating environmental effects?**

**No Impact.** The Project area is not contained within any habitat conservation plan or natural community conservation plan. Therefore, no impact would result with Project implementation.

**d) Would the project result in the development of incompatible uses and/or the creation of land use conflicts?**

**No Impact.** The Project's proposed uses are allowed and encouraged in the Community Plans and Plan Area Statements as approved and adopted by Placer County and TRPA for the Project area. Therefore, no impact would result with Project implementation.

**e) Would the project affect agricultural and timber resources or operations (i.e. impacts to soils or farmlands and timber harvest plans, or impacts from incompatible land uses)?**

**No Impact.** There are no agricultural resources or operations in the Project area. The only allowable timber resource operations in the Project area are reforestation operations, thinning, and

fuels reduction/fire management operations. Therefore, the Project would have no impact on agricultural resources or operations.

**f) Would the project disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?**

**No Impact.** The Project would not disrupt or divide an established community because the Project does not propose a rearrangement of land use.

**g) Would the project result in a substantial alteration of the present or planned land use of an area?**

**Less than Significant Impact.** The Project was designed to meet the existing land use planning requirements. Many of the Project's features, such as storm drain pipes, manholes, and storm vaults, are underground and would not affect the present land use. Some existing vacant parcels would be occupied by visible erosion control features such as berms, basins, and rock lined channels. These features would not significantly change the current open space use of these parcels and would be mainly on County, US Forest Service, or CTC land. Installation of some Project components along SR 28 may cause temporary disruptions to commercial operations because public access to businesses may be limited during construction. Alternative access to and parking for these areas would be provided and adequately signed by Placer County.

Visible components of the Project are proposed on five privately owned parcels. A small portion (less than 17 percent) of each of these parcels would change from private to public through either easements or partial acquisition. Assessor's Parcel Number (APN) 090-222-050 is designated commercial and is in the Commercial Core, but currently contains a multi-family residence. A basin is proposed on a 350 square-foot corner section of this parcel and would not move or displace existing structures. The basin would occupy less than 0.5 percent of the parcel because most of the basin would be in the right of way. Additionally, because the basin would straddle the property line of this parcel, it would be largely within the county building setback and therefore would not preclude the landowner from expanding the structures on his property in the future. APN 090-074-002 is privately owned and in the residential Plan Area Statement for Kings Beach. Its current land use is motel/hotel. The proposed basin would be on a vacant area of this parcel, occupying approximately 6,600 square feet of land, 17 percent of the total parcel. The motel/hotel and its existing accessories would be unaltered, but the area of the proposed basin, rock lined channel, and path would become public open space. APNs 090-046-006 and 090-046-024 are owned and maintained by Sierra Pacific Power and currently contain public utilities. The proposed basin and rock lined channel would be placed on less than 4,700 square feet, or approximately 8 percent, of the vacant portion of these parcels. The Project features would not affect existing or future land use because the remaining area of the parcels would provide ample development opportunities that would be allowed under the TRPA Code of Ordinances. Utilities are a special use in this Plan Area Statement and expanding them requires findings demonstrating the need, the safety, and conformance with existing land use (TRPA 2004). APN 090-052-014 currently has a smaller detention basin that would be increased in size as a component of this Project. This 68,993 square-foot parcel would be modified to contain 10,973 square feet of basins, rock lined channels, and paths. The parcel's existing land use as a park would not be affected by this change as it would still remain open to the public as open space.

**h) Would the project cause economic or social changes that would result in significant adverse physical changes to the environment such as urban decay or deterioration?**

**No Impact.** No economic or social changes resulting in adverse physical changes to the environment such as urban decay or deterioration would be caused by the Project. The Project utilizes existing open space and does not change its current or designated land use. The county would maintain all new public land or easements. The Project would update some out-dated and ill-

maintained existing erosion control features. The Project would have no impact on the economic or social climate of Kings Beach.

### 4.13.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to land use and planning, therefore no mitigation measures are required.

# 4.14 Mineral Resources

## 4.14.1 Existing Conditions/Affected Environment

The Project site is underlain by Holocene lake and alluvial deposits. The fine-grained nature of these sediments limits their potential for use as an aggregate resource. No mining of these materials is occurring at the Project site or in the vicinity. The Lake Tahoe Basin has not been evaluated under the state mineral classification system (Coler 2008). Therefore, the geologic materials at the Project area are not classified as important mineral resources.

### Regulatory Setting

The state Surface Mining and Reclamation Act (SMARA) of 1975 serves to ensure the proper reclamation of surface mining operations and to safeguard access to mineral resources of regional and statewide significance in the face of competing land uses and urban expansion. Under the authority of SMARA, the Department of Conservation is responsible for the classification and conservation of the state's mineral resources. No classified mineral resources are located within or adjacent to the Project.

## 4.14.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| MINERAL RESOURCES<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | X |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | X |

**a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

**No impact.** The Project area does not contain any known mineral resources. The geologic materials at the Project area are not typically mined as a mineral resource. The Project area is developed and the availability of any unknown mineral resources would not be impacted by implementation of the Project.

**b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No impact.** Local planning documents, including the Placer County General Plan, do not identify significant mineral resources within or adjacent to the Project area. The Project area is developed and implementation of the Project would not impact access to mineral resources, known or unknown.

## 4.14.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to mineral resources, therefore no mitigation measures are required.

# 4.15 Noise

## 4.15.1 Existing Conditions/Affected Environment

For the purposes of this document "noise" can be defined as any sound having intensity (in terms of volume, pitch or duration) at the point of human perception that has the potential to stress or damage the organs of human hearing or to cause unwanted or unhealthy physiological effects, or is otherwise considered unwanted or annoying by the listener. The effects of noise accumulate over time, so it is necessary to deal not only with the intensity of sound but also the duration of human exposure to the sound.

Noise level (or volume) is generally measured in decibels using the A-weighted sound pressure level (dBA), and is measured instantly. In addition to the instantaneous measurement of sound levels, the duration of sound is important because sounds that occur over a long period of time are more likely to be a nuisance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers duration as well as sound power level is the equivalent noise level (Leq). Typically, Leq is summed over a 1-hour period.

Community noise is commonly described in terms of the ambient noise level, defined as the all encompassing noise level associated with a given environment. The ambient noise level is measured by (Leq), and has been demonstrated to show very good correlation with community response to noise.

### Sensitive Receptors

Placer County identifies noise sensitive areas as land uses in which there is a reasonable sensitivity to noise and include single-family and multi-family Residential Areas, frequently used outbuildings, schools, hospitals, churches, rest homes cemeteries, public libraries, and other uses (Placer County Code [Article 9.36] 2008). The restrictions on noise levels for sensitive receptors are shown in the following table. The Project is located near sensitive receptors.

**Table NOISE-1. Placer County Noise Level Requirements For Sensitive Receptors**

| Sound Level Descriptor | Daytime (7 am to 10 pm) | Nighttime (l0 pm to 7 am) |
|---|---|---|
| Hourly Leq, dB | 55 | 45 |
| Maximum level, (Lmax) dB | 70 | 65 |

*Source: Placer County Code of Ordinances*

### Regulatory Setting

The State of California does not promulgate statewide standards for environmental noise but requires each county to include a noise element in its general plan (California Government Code Section 65302(f)). In addition, Title 4 CCR has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

Occupational noise exposure is regulated by California Occupational Safety and Health Administration (Cal-OSHA), which has promulgated Occupational Noise Exposure Regulations (Cal. Code Regs., tit. 8, §§ 5095-5099). These regulations set employee noise exposure limits and are equivalent to the Federal OSHA standards described above.

The California Noise Act of 1973 sets forth a resource network to assist local agencies with legal and technical expertise regarding noise issues. The objective of the act is to encourage the establishment and enforcement of local noise ordinances.

The Tahoe Regional Planning Agency (TRPA) Code of Ordinances regulates construction related noise in portions of Placer County within the Lake Tahoe region. Chapter 23.8 of the Code exempts construction related noise provided such activities are limited to the hours between 8:00 a.m. and 6:30 p.m. The Project would conform with these regulations as discussed in Section 4.15.

## 4.15.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| NOISE<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | X | | |
| b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? | | X | | |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | X | | |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels? | | | | X |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Project area to excessive noise levels? | | | | X |

**a) Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less than Significant Impact with Mitigation Incorporated.** The Project area is located near sensitive receptors and would result in temporary noise generation related to construction activities. Construction activities will include the use of heavy equipment and would exceed noise thresholds for sensitive receptors for brief periods of time during the construction period. Typical construction equipment generates noise levels ranging from about 51 to 92 dBA. Construction equipment noise levels with and without mitigation controls are shown in the following table.

TRPA exempts construction related noise between the hours of 8:00 a.m. and 6:30 p.m. All work will be conducted during these hours. Additionally, best management practices and mitigation measures NOISE-1 and NOISE-2 will be employed to reduce noise impacts to less than significant.

**Table NOISE-2. Noise Levels and Abatement Potential of Construction Equipment Noise (dBA) at 100, 500, and 1,000 feet**

| Equipment | Noise Level at 100 Feet | | Noise Level at 500 Feet | | Noise Level at 1,000 Feet | |
|---|---|---|---|---|---|---|
| | Without Controls | With Controls[a] | Without Controls | With Controls[a] | Without Controls | With Controls[a] |
| Front Loaders | 73 | 69 | 61 | 57 | 55 | 51 |
| Backhoes | 79 | 69 | 73 | 57 | 67 | 51 |
| Dozers | 74 | 69 | 62 | 57 | 46 | 51 |
| Tractors | 74 | 69 | 62 | 57 | 46 | 51 |
| Graders | 79 | 69 | 67 | 57 | 61 | 51 |
| Dump Trucks | 85 | 69 | 73 | 57 | 67 | 51 |
| Concrete Mixers | 79 | 69 | 67 | 57 | 60 | 51 |
| Pumps | 70 | 69 | 58 | 57 | 52 | 51 |
| Generators | 72 | 69 | 60 | 57 | 54 | 51 |
| Compressors | 75 | 69 | 63 | 57 | 67 | 51 |
| Rock Drills | 92 | 74 | 80 | 62 | 74 | 56 |
| Jack Hammers | 82 | 69 | 70 | 57 | 64 | 51 |
| Pneumatic Tools | 80 | 74 | 68 | 62 | 62 | 56 |
| Saws | 72 | 69 | 60 | 57 | 54 | 51 |
| Vibrators | 70 | 69 | 58 | 57 | 52 | 51 |

[a]Estimated levels can be obtained by selecting quieter procedures or machines and implementing noise control features that do not require major redesign or high cost (e.g., improved mufflers, equipment redesign, use of silencers, shields, shrouds, ducts, and engine enclosures).

*Source: USEPA 1971.*

**b) Would the Project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?**

**Less than Significant Impact with Mitigation Incorporated.** See first response above.

**c) Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**No Impact.** The Project would not result in an operational noise source. Use of motorized equipment would be limited to occasional maintenance activities (e.g., management of vegetation, repair of structures, and removal of sediment from water quality facilities).

**d) Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less than Significant Impact with Mitigation Incorporated.** See first response above.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project area to excessive noise levels?**

**No Impact.** The Project is not located in the vicinity of a public or private airstrip.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Project area to excessive noise levels?**

**No Impact.** The Project is not located in the vicinity of a public or private airstrip.

## 4.15.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure NOISE-1 –** The construction contractor shall employ noise-reducing construction practices to reduce impacts to sensitive uses during daytime hours. Measures that can be used to reduce noise may include, but are not limited to the following:

- Locating equipment as far as practical from noise sensitive uses.

- Using sound control devices such as mufflers on equipment.
- Turning off idling equipment.
- Using equipment that is quieter than standard equipment.
- Selecting construction access routes that affect the fewest number of people.
- Using noise reducing enclosures around noise generating equipment.
- Constructing barriers between noise sources and noise sensitive uses, or by taking advantage of existing barrier features such (terrain, structures) to block sound transmission.

**Mitigation Measure NOISE-2 –** Prior to construction, the contractor shall notify all residences in writing within 300 feet of construction areas. The contractor shall make available construction scheduling and assign a noise disturbance coordinator to be in charge of responding to complaints. The coordinators contact information will be clearly displayed on construction fencing. The coordinator will determine causes of complaints and ensure reasonable corrective actions are taken to solve the problem.

# 4.16 Population and Housing

## 4.16.1 Existing Conditions

The Project area is within the Kings Beach Census Designated Place (CDP). The CDP is a geographic region set forth by the U.S. Census Bureau (Census) for collection of data for the 7.0-mile-wide area on the north shore of Lake Tahoe between state line and Tahoe Vista (Census 2000).

Kings Beach community is located west of the Nevada-California state line. Single and multifamily homes are found throughout the Project area, but are concentrated north of SR 28 due to the proximity of the lake on the south side. According to the 2000 Census, 2,284 housing units are located within the Project area (Census 2005). The housing is relatively older with approximately 32 percent of homes constructed prior to 1960 (Census 2005). Single-family housing units account for around 71 percent of the Project area's homes. According to the 2000 Census, the percentage of mobile homes in the Project area is comparable to both Placer County and California statewide numbers (Census 2005).

According to the Census, the Kings Beach CDP had a population of approximately 4,037 in the year 2000, accounting for 1.7 percent of the 248,399 persons residing in Placer County. There are no current growth projections available for the Project area. According to projections prepared by Placer County, the unincorporated area designated as High Country (including the Project area), is projected to grow at an annual rate slightly lower than 0.3 percent between 2000 and 2010 (Placer County 2005a). This rate is much lower than the annual growth rate of 3.7 percent for Kings Beach between 1990 and 2000.

### Regulatory Setting

None applicable to implementation of the Project.

## 4.16.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| POPULATION / HOUSING<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (i.e. by proposing new homes and businesses) or indirectly (i.e. through extension of roads or other infrastructure)? | | | | X |
| b) Does the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | X |

**a) Would the project induce substantial population growth in an area, either directly (i.e. by proposing new homes and businesses) or indirectly (i.e. through extension of roads or other infrastructure)?**

**No Impact.** The Project improvements would not directly or indirectly induce substantial population growth in the area because no homes or businesses are planned for construction. Therefore, no impact would result with Project implementation.

**b) Does the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**No Impact.** The Project would not displace any existing housing structures for construction purposes. Therefore, no impact would result with Project implementation.

### 4.16.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to population and housing, therefore no mitigation measures are required.

# 4.17 Public Services

## 4.17.1 Existing Conditions

According to the Kings Beach Community Plan (1996) there are several existing public service facilities located within the Project area. These services include:

- Fire protection facilities
- North Tahoe Public Utility District, including Parks and Recreation
- Schools
- Community centers/multi-purpose facilities
- Placer County facilities
- Caltrans facilities

The headquarters for the North Tahoe Fire Protection District (NTFPD) is located by the intersection of State Routes 28 and 267. The NTFPD provides emergency and fire services for the greater north shore area of Lake Tahoe. Its response area ranges from just east of Dollar Hill to the Nevada State line (North Tahoe Community Plan Team 1996). The U.S. Forest Service provides support services for wildland fire protection.

The North Tahoe Public Utility District (NTPUD) provides sewer and water service to the Kings Beach community, as well as park and recreation service (North Tahoe Community Plan Team 1996). NTPUD administrative offices are located in Tahoe Vista while the Parks and Recreation office is located in the Community Center in downtown Kings Beach. Parks and recreation services extend to lands owned by Placer County and the State of California. NTPUD provides management and maintenance services for these recreation services.

The only school facility located in the Project area is Kings Beach Elementary School, located at the intersections of Wolf Street and Steelhead Avenue. Placer County's facilities (such as various health care facilities) in the Tahoe basin are widely distributed on the north shore, but concentrated in the centralized area of Tahoe City. The County has a library in downtown Kings Beach on Secline Street (North Tahoe Community Plan Team 1996). Located at the state beach is the North Tahoe Community Conference Center. This facility serves as a community and regional conference center.

California Department of Transportation (Caltrans) provides snow removal services for the State Highways in the Kings Beach Community (North Tahoe Community Plan Team 1996). This includes SR 28 which runs through the commercial corridor of the Project area. Caltrans facilities are located in the Tahoe City Community (North Tahoe Community Plan Team 1996).

### Regulatory Setting

The Public Services and Facilities Element of the TRPA Goals and Policies document includes a goals to ensure that an adequate level of public services and facilities are provided for the Lake Tahoe Basin which are consistent with environmental thresholds and other elements of the Regional Plan. Goal #1 and supporting policies provide for the upgrade and expansion of public services and facilities that are consistent with the Regional Plan. The proposed Project would include upgrading of storm water management facilities that would be consistent with the Plan.

## 4.17.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| PUBLIC SERVICES<br><br>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| Fire protection? | | | | X |
| Sheriff protection? | | | | X |
| Schools? | | | | X |
| Maintenance of public facilities, including roads? | | | | X |
| Other governmental services? | | | | X |

**Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public services?**

**No Impact.** Emergency access will always be maintained to public service providers during construction activities. The Project would have no adverse physical impacts associated with the provision of governmental services and/or facilities.

## 4.17.3 Avoidance, Minimization and/or Mitigation Measures

The Project will not cause significant adverse effects related to public services, therefore no mitigation measures are required.

# 4.18 Recreation

## 4.18.1 Existing Conditions

Several recreational facilities are located within the Project area boundary including the Kings Beach State Recreation Area (SRA). The Kings Beach SRA is a 25-acre publicly owned public recreation area on the northern shore of Lake Tahoe. Kings Beach State Recreation Area features 700 feet of lake frontage (California State Parks 2008). This day-use only area is popular for water sports during the summer (California State Parks). Parcels within the Kings Beach SRA are owned by the Department of Parks and Recreation (DPR), the California Department of Boating and Waterways (Cal Boating), Placer County, and the California Tahoe Conservancy (CTC) (North Tahoe Community Plan Team 1996). The North Tahoe Public Utility District (NTPUD) operates and maintains the parking areas and plaza area (NTPUD 2008). Use of the Kings Beach SRA is highest during the late spring, summer, and early fall months. Facilities include a pier, picnic area, restrooms, and parking lot. The plaza facilities include restrooms, barbeque and picnic sites, a playground area, and a basketball court (NTPUD 2008).

The Coon Street Boat Launch is also in the Project area. It is located at the southern end of Coon Street. The facility includes a boat launch ramp, restrooms, and a parking area (NTPUD 2008).

Another recreational facility that lies within the Project area is the baseball fields associated with Kings Beach Elementary School. This school is part of the Tahoe Truckee Unified School District (TTUSD) and is located at 8125 Steelhead Avenue (TTUSD 2008).

### Regulatory Setting

The 1987 Regional Plan for the Lake Tahoe Basin describes the needs and goals of the region and provides statements of policy to guide decision-making as it affects the region's recreation resources and remaining capacities. In general, the Regional Plan calls for preservation and enhancement of high-quality recreational experiences, including preservation of high-quality undeveloped shore zone and other natural areas. It also provides for consideration of provisions for additional access to the shore zone and high-quality undeveloped areas for low-density recreational uses. In addition, the Regional Plan mandates that a "fair share" of the total Tahoe basin capacity for outdoor recreation shall be made available to the general public.

## 4.18.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| RECREATION<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | X | | |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | X |

Although there would be no long-term impacts on recreation, short-term impacts would occur. Project construction would occur in the baseball fields and in Kings Beach SRA. During construction, these recreational facilities would have limited access for approximately one month during the spring/summer season. Construction efforts would interrupt recreational activities temporarily in these areas; however, no permanent long-term impacts on recreation would occur

because the recreational facilities would be restored to their prior condition after completion of construction.

**a) Would the project increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**Less than Significant Impact with Mitigation Incorporated.** The Project is not expected to increase recreational use such that substantial physical deterioration of the facility would occur or be accelerated. However, construction activities are proposed within the Kings Beach SRA and at playing fields at Kings Beach Elementary School. These activities would temporarily interfere with portions of these recreational facilities. The construction will require temporary closures of the facilities (each area closed for up to 3 weeks total for the construction of the project). Mitigation Measure REC-1 would be implemented to reduce the temporary effect of the construction activities.

**b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**No Impact.** This erosion control Project does not propose any new or expanded recreational facilities. Therefore there would be no impacts to the environment due to recreation expansion.

## 4.18.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure REC-1 –** Prior to construction activities at Kings Beach SRA and Kings Beach Elementary School, Placer County will coordinate with the agencies with authority over these facilities to provide advanced notice of construction activities. Construction in these areas will be limited to off peak times (May 1 – Memorial day or Labor day to October 15) in order to minimize the impact to the recreating public. During construction, unauthorized persons shall be restricted from the construction areas. Additionally, the County shall ensure that the construction footprint is kept to a minimum and that all disturbed areas are restored to their pre-construction condition.

# 4.19 Transportation and Traffic

## 4.19.1 Existing Conditions/Affected Environment

This section summarizes traffic data and analysis from the Kings Beach Urban Improvement Project Traffic Report (LSC 2007) and the CCIP EIR (Placer County 2007a). Placer County conducted a series of intersection and road tube traffic counts[7] throughout the residential roadways in Kings Beach in 2002. A summary of the intersection peak hour counts are presented in Table TRANS-1. The traffic volumes on Speckled and Dolly Varden Avenues at the SR 267 intersections are similar to the use in the rest of the neighborhood, indicating that minimal cut through traffic through the residential area occurs. Existing traffic volumes on the local streets are highest near SR 28 and secondly near SR 267. Volumes on north-south streets drop substantially two blocks north of SR 28. Coon Street has the greatest traffic activity of the local streets, especially in the southbound direction (Placer County 2007a). See Figure TRANS-1 for a summary of traffic volumes on local streets (LSC 2007). In addition, Placer County road tube counts conducted in the late 1990s for Speckled Avenue just east of SR 267 indicate Average Daily Trip (ADT) volumes range from 461 to 878 (LSC 2007).

**Table TRANS-1. Kings Beach 2002 Summer Peak Hour Intersection Counts**

| North-South Street | East-West Street | Date | Hour Beg. | Southbound | | | Westbound | | | Northbound | | | Eastbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LT | T | RT | LT | T | RT | LT | T | RT | LT | T | RT | TOT |
| SR 267 | Dolly Varden | 08/07/02 | 12:00 PM | 15 | 481 | 0 | 5 | 0 | 15 | 0 | 428 | 3 | 0 | 0 | 0 | 947 |
| Secline | Rainbow | 08/06/02 | 03:00 PM | 2 | 14 | 1 | 26 | 2 | 2 | 4 | 27 | 30 | 0 | 1 | 5 | 114 |
| Wolf | Dolly Varden | 06/27/02 | 12:30 PM | 1 | 0 | 4 | 0 | 18 | 0 | 0 | 0 | 0 | 2 | 17 | 0 | 42 |
| Deer | Steelhead | 08/05/02 | 12:45 PM | 5 | 14 | 6 | 3 | 11 | 0 | 5 | 28 | 4 | 6 | 6 | 10 | 98 |
| Bear | Golden | 06/27/02 | 03:15 PM | 3 | 29 | 1 | 4 | 4 | 0 | 4 | 48 | 8 | 2 | 7 | 3 | 113 |
| Coon | Speckled | 06/25/02 | 02:30 PM | 2 | 3 | 4 | 2 | 10 | 0 | 17 | 3 | 1 | 3 | 16 | 10 | 71 |
| Coon | Rainbow | 06/27/02 | 01:00 PM | 2 | 52 | 0 | 1 | 6 | 6 | 7 | 39 | 4 | 22 | 8 | 2 | 149 |
| Fox | Cutthroat | 08/07/02 | 03:00 PM | 0 | 12 | 0 | 7 | 6 | 2 | 4 | 14 | 8 | 0 | 6 | 1 | 60 |
| Fox | Dolly Varden | 07/17/02 | 11:45 AM | 0 | 14 | 1 | 1 | 3 | 3 | 3 | 19 | 5 | 3 | 1 | 3 | 56 |
| Fox | Loch Levon | 07/17/02 | 03:00 PM | 1 | 24 | 1 | 0 | 2 | 3 | 5 | 21 | 7 | 2 | 4 | 2 | 72 |
| Fox | Trout | 08/05/02 | 03:00 PM | 2 | 50 | 0 | 2 | 1 | 1 | 2 | 48 | 10 | 12 | 1 | 2 | 131 |

Volumes reported are the higher of those observed on two days of counts, with the exception of Wolf/Dolly Varden which is based on data from one day only.

Notes: RT = Right Turn, LT = Left Turn, T = Through, TOT = Total

*Source: Kings Beach Urban Improvement Project Traffic Report, Table 9 (LSC 2007)*

Placer County has set the maximum preferred traffic volume along the Kings Beach residential local streets at 2,000 to 3,000 vehicles per day. An adverse effect would be caused if daily traffic levels exceeded this volume (Placer County 2007a).

The nearest airport to the Project area is the Truckee Tahoe Airport located approximately 15 miles away. There are currently limited alternative transit methods in the Kings Beach area. No dedicated bicycle paths or lanes exist in the Project area. Most cycling occurs along the outer edge of the travel lanes on SR 28. The Tahoe Area Rapid Transit (TART) public transit system run by the county and the Tahoe Trolley both service the Project but their routes are only along SR 28 and not the local streets (Placer County 2007a).

[7]Tube counts involve laying tubes across the road, which counts one car every time it is run over.

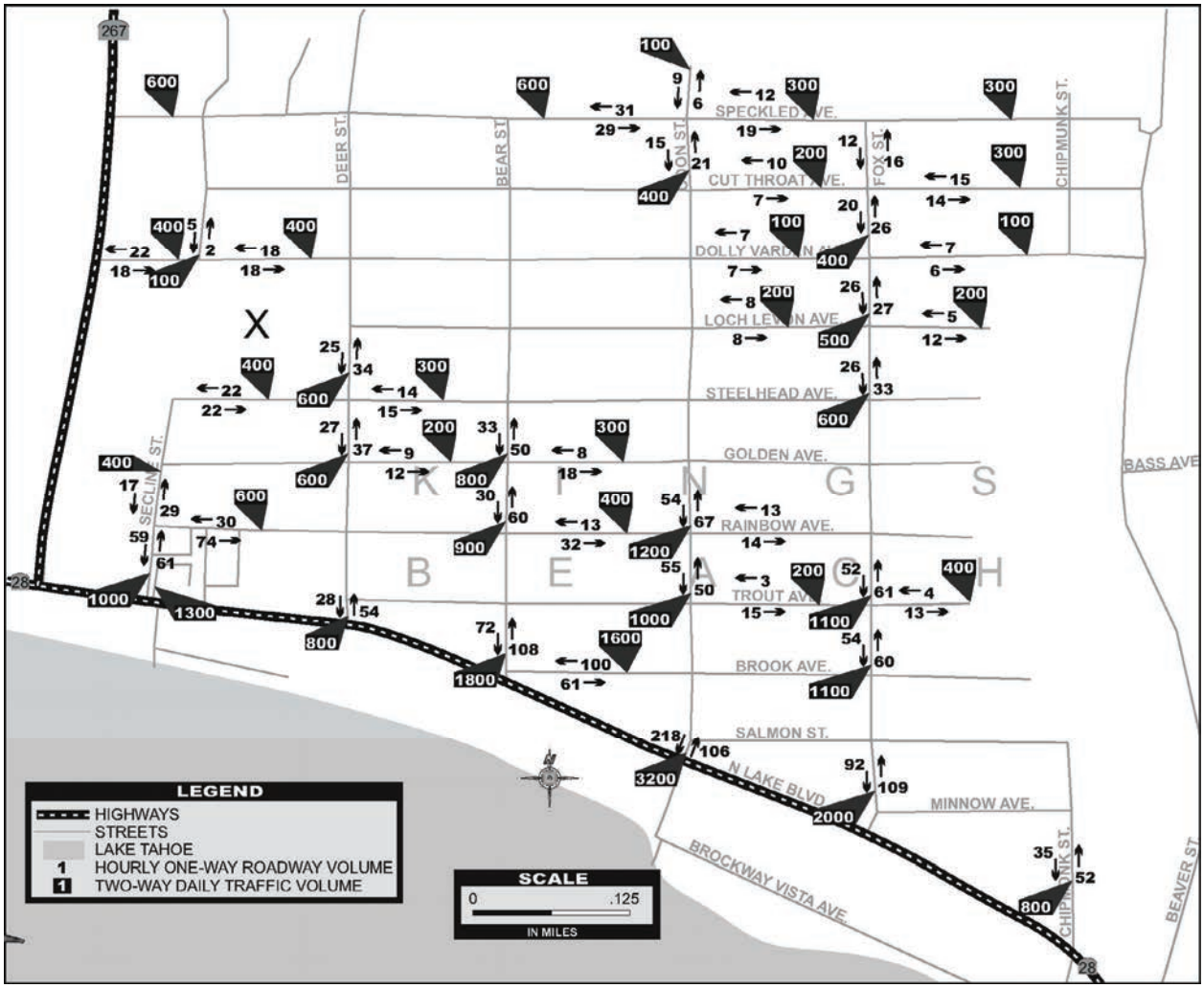


**Figure TRANS-1. Traffic Volume on Kings Beach Local Roadways**
*Source: Kings Beach Urban Improvement Project Traffic Report, Figure 5 (LSC 2007)*

## Regulatory Setting

The Project does not include construction of new roadways or new permanent sources of increased traffic. No new parking facilities are proposed. There are no applicable regulatory requirements relative to the post-construction phase of the Project.

## 4.19.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| TRANSPORTATION / TRAFFIC<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | X | | |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | | X |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | | X |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | X |
| e) Result in inadequate emergency access? | | X | | |
| f) Result in inadequate parking capacity? | | X | | |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | | | | X |

**a) Would the project cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?**

**Less Than Significant Impact with Mitigation Incorporated.** Replacement of the two Griff Creek road crossing culverts with open arch culverts (located at Speckled and Dolly Varden Avenues over Griff Creek) would require temporary road closures. One closure would be on Speckled Avenue between SR 267 and Wolf Street. The second closure would be on Dolly Varden Avenue between SR 267 and Wolf Street. Each closure would be effective for up to two weeks, at separate times. Because these two streets provide the only access to SR 267 from the neighborhood, the culvert replacements would be staggered so the two adjacent streets would not be closed at the same time. During the construction period, traffic would be rerouted to either Speckled or Dolly Varden Avenues, depending on where construction is located. Because the road closures and rerouting of local traffic would occur for two weeks or less, the Project would not cause a permanent increase in traffic or reduction in street capacity relative to existing conditions. However, closures of Speckled and Dolly Varden Avenues would result in temporary disruptions of local traffic flow and could present traffic safety issues. Traffic controls (Mitigation Measure TRANS-1) would be necessary to reduce these adverse effects on traffic to a less-than-significant level.

Placer County traffic volume counts conducted in the late 1990s for Speckled Avenue just east of SR 267 indicate ADT volumes ranging from 461 to 878. The 2002 counts for the Speckled Avenue and SR 267 intersection indicate an average volume of 600 vehicles per day. Dolly Varden Avenue and SR 267 intersection has a volume of 400 vehicles per day (LSC 2007). During Project construction, no more than 4 haul trucks would travel per hour through the local streets to SR 267, which equates to 32 trucks per day. Taking the highest count from Speckled Avenue (878 vehicles), Dolly Varden Avenue (400), and assumed construction traffic (32), the total volume would be 1,310 vehicles per day. The Project's additional 32 truck trips would not increase traffic on Speckled and Dolly Varden Avenues above the Placer County level of service standard of 2,000 to 3,000 vehicles per day.

Project construction traffic would not cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; therefore, the Project would have a less than significant impact on Speckled and Dolly Varden Avenues and no mitigation measures would be required.

Road closures would also take place where culvert placement/replacement would cross the street or when new storm drain pipe needs to be installed within the street. These closures would take place on almost every street in the residential neighborhood. See Figure 5 for detailed maps of proposed improvements. During construction a street may be partially closed (one lane of traffic) during business hours for up to 10 hours per day and entire road closures may occur for up to 4 hours per day. Since the residential streets form a grid network, short detours would be feasible and would add little delay to normal traffic. Every night, from 6 PM to 7 AM, the residential roads under construction would be reopened to two lanes of traffic. These additional closures would cause a less than significant impact to traffic because all closures occur during business hours when residents are not likely to be impacted. To ensure that traffic impacts are minimized during construction, a Traffic Management Plan will be prepared (see Mitigation Measure TRANS-1).

**b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?**

**No Impact.** The Project does not propose any residential or commercial structures that would permanently increase traffic. Therefore, the Project would not cause a long-term increase in vehicle trips or volume to capacity ratios that would exceed the current level of service.

**c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The Project would not affect air traffic patterns because the improvements would be mostly at or below grade, and the nearest airport is 15 miles away.

**d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**No Impact.** The Project would not change road geometry because no road improvements are proposed.

**e) Would the project result in inadequate emergency access?**

**Less than Significant Impact with Mitigation Incorporated.** Emergency access would be provided at all times during all full and partial road closures. Access for Project components which require partial closure would provide one lane for emergency access at all times. During closures of Speckled and Dolly Varden Avenues over Griff Creek , a specific detour for emergency vehicles would be developed and included in the Traffic Control Plan prepared for the Project (Mitigation Measure TRANS-1). Therefore, the Project would have a less than significant impact on emergency access following implementation of required mitigation measures.

**f) Would the project result in inadequate parking capacity?**

**Less than Significant Impact with Mitigation Incorporated.** The Project would not permanently remove or displace legal parking. Concrete rolled curb-and-gutter would be installed, which would not permanently limit or remove access to parking. However, short-term impacts to parking would occur during construction because of lane closures and approximately 5-10 construction-related workforce vehicles would be parked on the local streets. Most construction vehicles would be parked in designated staging areas throughout the Project. Therefore, Mitigation Measure TRANS-2 would be required to reduce short-term impacts on parking to less than significant levels. Construction workers will be encouraged to carpool to the work site to reduce

traffic to and with in the project area and the contractor would provide parking in staging areas where feasible.

**g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?**

**No Impact.** The Project would not conflict with adopted policies, plans, or programs supporting alternative transportation because no public transit services are provided on the local roads that would be temporarily closed during Project construction.

## 4.19.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure TRANS-1 –** During the final stage of Project design, Placer County will require its Contractor to prepare a Construction Traffic Management Plan (TMP) in accordance with the *Manual on Uniform Traffic Control Devices,* California Supplement 2003, Part 6 Temporary Traffic Control (or current version) (American Association of State Highway and Transportation Officials 2003) and Caltrans draft *Guidelines for Projects Located on the California State Highways in the Lake Tahoe Basin* (California Department of Transportation n.d.). This plan will ensure that local traffic is accommodated and that access to businesses and residences is maintained during construction activities.

Furthermore, the TMP will promote driver and road safety, ensure safety for bicyclists and pedestrians within the construction area, and allow adequate emergency access for police, fire, ambulance, and other emergency vehicles. The TMP will also require the construction contractor to notify law enforcement, fire protection, and emergency medical services at least 1 week prior to implementation of detours or lane closures so that these entities may plan accordingly. These notifications will include the location and duration of closures. Additionally, emergency vehicles will be allowed access to any sections of roadway that have been closed for construction.

**Mitigation Measure TRANS-2 –** Construction workers will be encouraged to carpool to the work site to reduce traffic to and within the Project area. Additionally, the contractor would provide parking in staging areas where feasible.

# 4.20 Utilities and Service Systems

## 4.20.1 Existing Conditions

The Project site has several existing above ground and underground utilities. The above ground utilities consist of electricity, telephone, and cable television. The underground utilities consist of natural gas, sanitary sewer, and potable water. Existing utility services and corresponding providers are as follows:

- Electricity provided by Sierra Pacific Power Company
- Telephone provided by AT&T
- Cable TV provided by Charter Communications
- Natural Gas provided by Southwest Gas Corporation
- Sanitary Sewer and Potable Water provided by North Tahoe Public Utility District (NTPUD)

The Project site has existing solid waste collection/disposal service that is provided by Tahoe Truckee Sierra Disposal. Placer County's Eastern Regional Landfill , located on Cabin Creek Road outside Truckee, is the closest landfill to the Project area. The landfill accepts solid waste (including non-hazardous construction waste) for disposal. The landfill has separate charges for mixed solid waste and separated waste (i.e., segregated wood and inert waste). The landfill also collects recyclable materials. An alternate disposal facility is the Waste Management Lockwood Landfill , located just outside Reno, Nevada, which also accepts solid waste. Additionally, the Lockwood Landfill is licensed to accept soil with petroleum hydrocarbon contamination for treatment and disposal.

### Regulatory Setting

None applicable to implementation of the Project.

## 4.20.2 Project Issue Analysis

The Project was evaluated for the following potential issues:

| UTILITIES AND SERVICE SYSTEMS<br><br>Would the project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | X | |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | X | | |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | X |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | X |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | | X |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | X | |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | | | X |

**a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**Less Than Significant Impact.** The Project components include construction of new storm water collection facilities as well as expansion/retrofitting of the existing facilities. The new storm water facilities will collect and convey flows through vegetated swales, rock-lined channels, storm drain pipe and culverts, detention basins, sediment filtration facilities, and infiltration galleries. The Project addresses the need for erosion control and adequate storm water conveyance facilities to improve the environment and water clarity of Lake Tahoe. The Project would not create structures which would increase waste to be treated at sanitary waste treatment facilities.

**b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less than Significant Impact with Mitigation Incorporated.** The Project does not require a significant nor long-term supply of potable water, nor does the Project require wastewater treatment services. Sanitary waste facilities for the Project would be restricted to temporary portable toilets used during construction.

However, potential temporary impacts to water supply facilities, such as short-term interruption of service, during excavation activities could occur during implementation of the Project. It is possible water lines encountered during excavation would need to be shut off to avoid unplanned interruption of service caused by accidental damage to the water lines. Implementation of Mitigation Measure UTIL-1 would minimize the potential for accidental damage to underground utilities.

**c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**No Impact.** The Project components include construction of new storm water collection facilities as well as expansion/retrofitting of the existing facilities. The new storm water facilities will collect and convey flows through vegetated swales, rock-lined channels, storm drain pipe and culverts, detention basins, sediment filtration facilities, and infiltration galleries. The Project addresses the need for erosion control and adequate storm water conveyance facilities to improve the environment and water clarity of Lake Tahoe.

**d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**No Impact.** The Project does not require a significant nor long-term supply of potable water.

**e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**No Impact.** The Project does not require wastewater treatment services.

**f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less than Significant Impact.** The potential solid waste generated by Project construction would be disposed at the Placer County Eastern Regional Landfill or Waste Management Lockwood (Nevada) Landfill; the capacity of both facilities is adequate to accept expected volumes of waste generated by the Project.

**g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?**

**No Impact.** The Project would comply with federal, state, and local statutes and regulations related to management of solid waste.

## 4.20.3 Avoidance, Minimization and/or Mitigation Measures

**Mitigation Measure UTIL-1 –** Prior to commencement of excavation and grading activities, the contractor shall be required to notify USA Alert to establish the location of all know utility facilities. For excavation within the area of know utility lines, the contractor shall 1) notify the appropriate utility and 2) "pothole" (i.e., probe the ground to the suspected depth of utility features) to verify the presence or absence of suspected facilities prior to commencing excavation activities.

# 4.21 Cumulative Impacts/Effects

Cumulative impacts are defined under CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects." (Section 15355 of the CEQA Guidelines). Under NEPA (40 CFR 1508.7), cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions". This section addresses cumulative impacts/effects potentially resulting from the combination of the effects of the Project with those of other past, present, and probable future projects causing related or similar types of impacts. This may include projects outside the control of the Project proponent.

## 4.21.1 Past, Present and Reasonably Foreseeable Future Actions Considered for Cumulative Impact Analysis

The CEQA Guidelines Section 15130(b)(1) outlines two approaches to cumulative impact analysis: (a) listing past, present, and probable future projects producing related or cumulative impacts or (b) using projections contained in a general plan or related planning document. This environmental document uses the list-based approach.

Potential projects for evaluation of cumulative impacts were identified by several research methods, including telephone and email correspondence with agency personnel, internet research, and review of potential cumulative impacts analyses from environmental reports prepared for other area projects. Projects that need not be included in the cumulative impact analysis include:

- Projects that are consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have already been adequately addressed in a certified EIR for that plan, and
- Projects whose cumulative impacts were adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action [Section 15183(j)].

The list of cumulative projects (Table CUM-1) was determined using the following factors:

*Similar Environmental Effects*–a relevant project contributes effects on resources also affected by the proposed project;

*Geographic Scope and Location*–a relevant project is located within a defined geographic scope for the cumulative effect; and

*Timing and Duration of Implementation*–effects associated with activities for a relevant project (e.g., short-term construction or demolition, or longer operations) could coincide in timing with the effects of the proposed project.

**Table CUM-1. Current and Future Projects in the Kings Beach Area Considered for Cumulative Effects Analysis**

| *CALIFORNIA DEPARTMENT OF TRANSPORTATION PROJECTS* | |
|---|---|
| **PROJECT (and year of construction, when available)** | **PROJECT TYPE** |
| PLA 28 - SR 28 in Placer County | Transportation |
| PLA 267 - SR 267 in Placer County | Transportation |
| SR 28 from Tahoe State Park (0.8 mile east of SR 89) to SR 267 (2008-2010) | Water Quality |
| SR 89 from Alpine County Line to SR 50 | Water Quality |
| SR 89 from Junction SR 50/89 to Cascade Road | Water Quality |
| SR 89 from Cascade Road to north of Eagle Falls viaduct | Water Quality |
| SR 89 from Meeks Creek to Placer County Line | Water Quality |
| SR 89 from El Dorado County Line to Junction of SR 89/28 | Water Quality |
| SR 89 Junction SR 89/28 to Squaw Valley Road | Water Quality |
| SR 50 0.2 mile to 1.1 miles each of Echo Summit | Water Quality |
| SR 50 Meyers Road to Incline Road | Water Quality |
| SR 50 South Lake Tahoe Airport to Junction SR 50/89 | Water Quality |
| SR 50 Sky Run Boulevard to Stateline | Water Quality |
| SR 50 Junction SR 50/89 to Trout Creek | Water Quality |
| SR 28 from Chipmunk Street to California/Nevada Stateline (2007) | Water Quality |
| SR 267 from Stewart Way to Junction SR 267/28; Brockway Summit (2009) (EIP #997) | Water Quality |
| SR 267 from Brockway Summit to Stewart Way (EIP #748) | Water Quality |
| SR 267 from SR 28 to 2.8 miles north of SR 28 (2007) | Water Quality |
| Replace Signals (SCH #2001078417) | Transit |
| Various - Install traffic operation system (2009) | Other |
| *PLACER COUNTY PROJECTS* | |
| **PROJECT** | **LEAD AGENCY** |
| Commercial Core Improvement Project (SCH #2002112087) (EIP #10060) | Placer County Dept. of Public Works |
| Kings Beach CCIP Parking Compensation | Placer County Dept. of Public Works |
| Brockway Erosion Control Project (SCH #2007082049) | Placer County Dept. of Public Works |
| Tahoe Estates Erosion Control Project (SCH #2005122114) | Placer County Dept. of Public Works |
| Kings Beach Town Center (PEIR T20080036) | Placer County Planning Dept. |
| Tahoe Sands Redevelopment (PEIR T20070191) | Placer County Planning Dept. |
| Cal Neva Resort Hotel/Casino Restoration (PCPB T20060722) | Placer County Planning Dept. |
| B & G Excavation Inc (PDSC T20060630) | Placer County Planning Dept. |
| Tahoe Vista Apartments (SCH #2006022100) | Placer County Planning Dept. |
| KB Mixed Use Village (SCH #2005082096) | Placer County Planning Dept. |
| Red Wolf Lodge, Phase V Expansion | Placer County Planning Dept. |
| North Tahoe Marina Expansion | Placer County Planning Dept. |
| Mourelatos 6-Acre Hotel Project | Placer County Planning Dept. |
| Miscellaneous redevelopment/subdivision of existing development. | Placer County Planning Dept. |
| *TRPA PROJECTS* | |
| **PROJECT** | **PROJECT TYPE** |
| EIP #351 - California State Parks (Upper Camploop Removal) | Soil Conservation/SEZ |
| EIP #530 - East of Kings Beach Boat Ramp Spawning Habitat Restoration | Fisheries |
| EIP #658 - Griff Creek | Fisheries |
| EIP #619 - Kings Beach SRA Public Pier | Recreation |
| EIP #816 - Placer County Transit Improvements (Transit Bus Shelters) | Air Quality/Transit |
| Vista Village Workforce Housing Project (SCH #2003032087) | Housing |

**Table CUM-1. Current and Future Projects in the Kings Beach Area Considered for Cumulative Effects Analysis (continued)**

| |
|---|
| ***CALIFORNIA TAHOE CONSERVANCY PROJECTS*** |
| Dolly Varden Avenue Stewardship Land Management Services Project (SCH #2007118131) |
| Brockway Fuel Hazard Reduction Project (SCH #2005088079) |
| Coordinated Resource Management and Planning for the Endangered Plant, Tahoe Yellow Cress (SCH #2002128227) |
| North Tahoe Beach Center Replacement Project (SCH #2002072066) |
| Area Restoration Projects (SCH #2001068008) |
| Water Quality Improvement Project, Planning Grant (SCH #2000128334) |
| Fire Hazard Reduction Project (SCH #2000068001) |
| KB Elementary School/Adopt-A-Watershed Program (SCH #1996104035) |
| Site Protection Projects (SCH #1995101616) |
| School Restoration Project (SCH #1994107639) |
| Restoration Enhancement Project (SCH #1993103936) |
| Recreation Enhancements (SCH #1993022021) |
| Erosion Control Project (SCH #1992101561) |
| Recreation Enhancement Project (SCH #1990104093) |
| Recreation Enhancement Project (SCH #1990102403) |
| ***NEVADA DEPARTMENT OF TRANSPORTATION PROJECTS*** |
| SR 28 from SR28/SR431 Intersection to Nevada-California Border (erosion control) |
| ***TAHOE TRUCKEE UNIFIED SCHOOL DISTRICT PROJECTS*** |
| KB Student Activity Center (SCH #2002042094) |
| KB Elementary School Expansion (SCH #1997107177, 1997042042) |
| ***NORTH TAHOE PUBLIC UTILITIES DISTRICT PROJECTS*** |
| Construction of two water tanks in the NTPUD main system |
| North Tahoe Regional Park redevelopment, expansion and improvements |

SCH # = State Clearing House number; PEIR/PCPB/PDSC = Placer County project designations; EIP = Environmental Improvement Program

Sources: Placer County 2007a, 2008a; California OPR 2008; North Tahoe Citizen Action Alliance 2008a, 2008b

## 4.21.2 Cumulative Impacts/Effects Analysis

This section evaluates the potential environmental impacts of the Project when considered together with other projects being completed in the Project area.

Other projects would be subject to NEPA/CEQA/TRPA review and local zoning and subdivision regulations, and would be required to implement project-specific mitigation measures to reduce potential impacts.

Most of the direct impacts associated with the Project are related to construction of storm water conveyance and treatment facilities. The analysis of cumulative effects focuses primarily on potentially concurrent construction projects, and less on the operation or maintenance of other nearby infrastructure projects under normal conditions.

### Aesthetics

The Project would not result in significant adverse impacts on scenic resources. Improvements to Griff Creek and existing storm water drainage facilities, as well as the addition of storm water detention basins and removal of fill, would result in a net, long-term improvement in the visual quality of the Project area. When viewed in combination with those of other reasonably foreseeable projects the short-term localized effects of construction activities related to the Project site would not be cumulatively significant.

### Agricultural Resources

To have an adverse effect on agricultural resources, a project would result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide importance to non-agricultural use, or conflict with existing zoning for agricultural use or with a Williamson Act contract. The Project would not result in adverse effects on agricultural resources, and therefore would not contribute to any effects on agricultural resources that may be related to effects of the identified cumulative projects.

### Air Quality

Cumulative impacts would occur if the combined effects of the cumulative projects (including the Project) would result in conflicts with an applicable air quality or attainment plan and violations of any air quality standard or contributions to a current or projected air quality violation. The Project would result in temporary emissions of air pollutants (including greenhouse gas emissions) during construction of the Project. Similarly, emissions would occur during construction of other identified cumulative projects. Emission of air pollutants related to construction activities is evaluated in the regional air emissions inventories. The effects of the Project would be reduced through implementation of Mitigation Measures AIR-1 through AIR-3, as discussed in Section 4.4. The operation of construction equipment and the associated air emissions are permissible under existing regulations and would not result in cumulatively considerable effects on meeting air quality or attainment plans or violations of air quality standards.

### Biological Resources

Although the Project would result in short-term adverse effects on biological resources, the effects would be avoided or minimized by implementation of Mitigation Measures, as discussed in Section 4.5. No long-term adverse effects on habitat would occur as a result of implementation of the Project. The Project would result in improvements to habitat (e.g., channel stabilization and revegetation) in the SEZs within the Project area. Other cumulative projects may result in localized adverse effects on biological resources but the Project effects (following mitigation) would not contribute to those effects. Additionally, given that other development projects would be required to implement mitigation measures for significant effects, the overall cumulative impacts on biological resources would be further reduced.

### Cultural Resources

The effects of the Project on historic and paleontological resources and human remains would be avoided or minimized through implementation of Mitigation Measures CUL-1 through CUL-2 (Section 4.6). The mitigations protect the potential for disturbance of any cultural resource which may be present at the Project Site. These resources would be local and their protection would not result in a residual impact which would be cumulatively considerable. Additionally, given that other development projects would be required to implement mitigation measure for significant impacts under NEPA/CEQA/TRPA review.

### Geology, Soils, and Seismicity

The effects of the Project would not result in significant impacts associated with geology, soils, and seismicity. The effects of the Project would be localized and would be avoided or reduced through implementation of Mitigation Measures GEO-1 through GEO-2 (Section 4.8) and WQ-1 (Section 4.11). The Project would not affect geology, soils, or seismicity conditions away from the Project area and, therefore, would not result in a cumulatively considerable effect when viewed in combination with those of other reasonably foreseeable projects.

### Hazards and Hazardous Materials

This section does not address cumulative impacts to which the Project would not contribute, such as the routine transport, use, or disposal of hazardous materials; emissions or handling of hazardous or

acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; safety hazards for people residing or working within two miles of a public airport, public use airport, or private airstrip; or impairment of or interference with an adopted emergency response plan or emergency evacuation plan.

The Project would have effects on the local conditions relative to hazards and hazardous materials. Implementation of Mitigation Measures HAZ-1 through HAZ-6 (Section 4.10) would reduce or avoid the effects related to hazardous materials conditions within the Project area. The effects of the Project would not cause increases in the effects of other cumulative projects related to the use, management, or disposal of hazardous materials. Additionally, given that other development projects would be required to implement mitigation measures for significant impacts under NEPA/CEQA/TRPA review, the overall cumulative effects related to management of hazardous materials would be further reduced.

### Hydrology and Water Quality

The primary purpose of the Project is to improve the management and treatment of storm water runoff and implementation of the Project would result in benefits to the hydrologic function of Griff Creek and SEZs within the Project area. Therefore, the Project would improve long-term hydrology and water quality management in the area of cumulative projects. The short-term adverse effects related to construction of the Project on hydrology and water quality are reduced or avoided by implementation of Mitigation Measures WQ-1 through WQ-6 (Section 4.11).

The benefits of the Project and minimization of short-term effects would not, therefore, result in cumulatively considerable adverse impact when in combination with those of other reasonably foreseeable projects. Additionally, given that other development projects would be required to minimize adverse effects on hydrology and water quality under existing water quality regulations, the overall cumulative impacts on hydrology and water quality would be further reduced.

### Mineral Resources

The Project would have no impact on the availability of mineral resources. Therefore, no cumulative effect would result.

### Noise

The Project would result in short-term adverse noise effects. When viewed in combination with other reasonably foreseeable projects in the immediate Project area occurring at the same time, implementation of the project could result in cumulative noise impacts and the project's contribution to this impact is cumulatively considerable. The Project's contribution to significant cumulative impacts would be reduced through the implementation of Mitigation Measures NOISE-1 and NOISE-2, as described in Section 4.15 of this environmental document. Other development projects would be required to implement mitigation measures for significant impacts under CEQA, the overall cumulative noise impacts would be further reduced.

### Population, Employment, and Housing

The Project does not propose the construction of housing and would only temporarily employ new workers during the construction period. The operation and maintenance of the Project would not require new workers. Therefore, the Project would have no impact on population, employment and housing and would not have a cumulatively considerable effect on these resources.

### Recreational Resources

This section addresses the potential cumulative impacts of directly removing or damaging recreational resources, such as parks, trails, bicycle paths, and other resources. In addition, this section addresses the potential cumulative impacts that would indirectly result in deterioration of the quality of the recreational experience, for instance, air quality or noise effects. Finally, this section

addresses the potential cumulative impacts of disrupting access to recreation facilities, which would separate a community from some of the established amenities used by its members.

This analysis does not review areas on which the Project would have no impact. This includes operational impacts on all recreation features, as well as the increased use of recreational facilities or the need for new recreational facilities. The Project would only affect recreation during its construction periods. Project construction would affect only the recreational facilities within the Project area and the effects are avoided or minimized by the Project.

### Transportation and Traffic

The potential effects of the Project on transportation and traffic would be localized and short-term. Implementation of Mitigation Measure TRANS-1 and TRANS-2 (Section 4.19) would reduce these localized and short-term effects to a less-than-significant level. No long-term or cumulatively considerable effects would occur. Additionally, given that other development projects would be required to implement mitigation measures for significant impacts under NEPA/ CEQA/TRPA review, the overall cumulative impacts on transportation and traffic would be further reduced.

### Utilities and Service Systems

The geographic scope of potential cumulative impacts on utilities is limited to the immediate vicinity of the Project area for disruption impacts and the service areas of regional service/utility providers. The impacts/effects of the Project on utilities and service systems would be localized and avoided or minimized through implementation of Mitigation Measure UTIL-1 (Section 4.20). When viewed in combination with those of other reasonably foreseeable projects, implementation of the Project would result in cumulatively less than significant impacts on utilities and service systems because all projects would be required to comply with local regulations protecting disruption of utilities and area landfills have enough remaining capacity to accommodate waste from all projects.

# 4.22 CEQA Mandatory Findings of Significance

| MANDATORY FINDINGS OF SIGNIFICANCE<br><br>Does the Project: | Potentially Significant Impact | Less than Significant Impact with Mitigation Incorporated | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | X | | |
| b) Have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)? | | X | | |
| c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | X | | |

**a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Less than Significant Impact with Mitigation Incorporated.** Impacts to biological and cultural resources are analyzed in Sections 4.5 and 4.6, respectively, of this environmental document. Following implementation of the Avoidance, Minimization and/or Mitigation Measures prescribed in this document, the Project would not degrade the biological or cultural resources in the Project area. The Project would in fact result in environmental benefits to biological resources, hydrology and water quality.

**b) Does the Project have impacts that are individually limited, but cumulatively considerable?**

**Less than Significant Impact with Mitigation Incorporated.** Cumulative impacts are evaluated in Section 4.21 of this environmental document. Following implementation of the Avoidance, Minimization and/or Mitigation Measures prescribed in this document, the Project would not result in cumulatively considerable impacts. The project would contribute to a cumulative beneficial impact on the quality of storm water runoff and the clarity of Lake Tahoe waters.

**c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

**Less than Significant Impact with Mitigation Incorporated.** Following implementation of the Avoidance, Minimization and/or Mitigation Measures prescribed in this document, the Project would not result in substantial adverse effects on human beings, either directly or indirectly. Project impacts to people in the area, including but not limited to those related to aesthetics, air quality, climate change, environmental justice, hazardous materials, noise, population, housing, public services, traffic, utilities and service systems, will be less than significant or nonexistent.